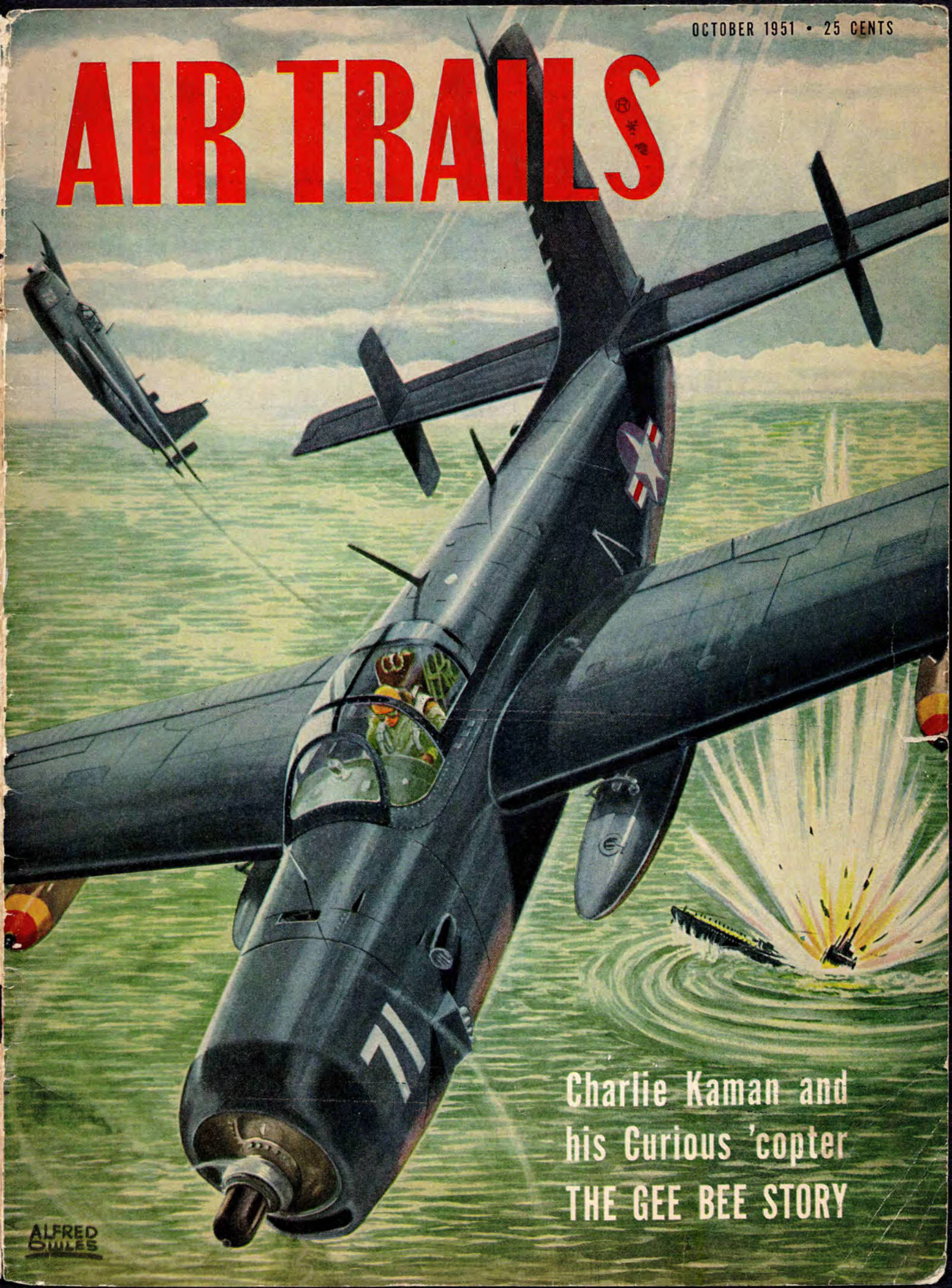


OCTOBER 1951 • 25 CENTS

AIR TRAILS



Charlie Kaman and
his Curious 'copter
THE GEE BEE STORY

ALFRED
SMILES

now excellent paying aviation positions in California!

with just 5 months training



Aircraft Production that leads to A & E License



Engineering Drafting that leads to Aeronautical Engineering

Imagine . . . in less than six months from today, you can be drawing your first pay check as a trained technician in the aviation industry. These are not ordinary jobs, but positions with ample opportunity for advancement, high starting salaries, unlimited opportunities for over-time, and a secure place for you in sunny Southern California.

Cooperating with the greatly expanding aviation industry, California Flyers has developed two courses designed to meet the critical needs of the industry—Aircraft Engineering Drafting, which will give you an opportunity that will lead into aeronautical engineering or the Aircraft Production Course, which can lead to a C.A.A. Aircraft Mechanic's License . . . either course offers the ambitious young man an opportunity to gain the necessary training in the shortest practical length of time and with a minimum of training experience.

For security . . . a bright future . . . and a good

paying position, start your training at California Flyers today. Send for complete information now.

Engineering Drafting (Aircraft), a fundamental course covering basic factors in design, stress and strain analysis, production techniques and other facts of construction. Provides a comprehensive background qualifying you for advanced training in Aeronautical Engineering.

Aircraft Production, a basic and thorough course in metals, fabrication, stress and strain factors, contour assembling, and contemporary construction techniques. Provides a thorough background which can, with further study, prepare you for a C.A.A. Aircraft Mechanic's license.



ADJACENT LOS ANGELES AIRPORT • INGLEWOOD, CALIFORNIA

CALIFORNIA FLYERS

School of Aeronautics, Dept. AT-10
1720 W. Florence Ave., Inglewood 1, Calif.

Please send me illustrated brochure containing full information about courses, tuition, etc. and application blank. I understand this will not obligate me in any way.

I AM INTERESTED IN THE FOLLOWING:

- ☐ **ENGINEERING DRAFTING (AIRCRAFT)**—California Flyers has orders from the aircraft industry for as many graduates as can be trained. New up-to-date 22 weeks' course prepares you for draftsman's job in essential industry.
- ☐ **AIRCRAFT PRODUCTION**—Special 16 weeks' course prepares you for job in aircraft production.

Address _____

City _____ Zone _____ State _____

THERE IS NO FLYING REQUIRED in AVIATION MECHANICS COURSES at CALIFORNIA FLYERS SCHOOL of AERONAUTICS

The WINGS SWEEP BACK in FLIGHT!

The wings at different angles shown above are on the same airplane. The angle of sweepback can actually be changed in flight!

Built by Bell aircraft for research purposes, the X-5 is to be used to search out the effects of air flow on swept-back wings.

Like all new developments in aviation, the X-5 is a result of creative thinking done by men who have a thorough knowledge of this field . . . men who know that aviation must constantly move forward.

To place yourself on an equal level with the top men in any field of aviation, you will need the best education you can receive. You can prepare yourself in the best way possible by attending PARKS COLLEGE.

At Parks you will receive a Bachelor of Science in Aeronautics Degree from Saint Louis University — the first university west of the Mississippi. In the 400-year old tradition of Jesuit schools, Parks teaches you not only how to make a living, but also how to live.

ENTRANCE REQUIREMENTS . . . Applicants must be graduates from a 4-year high school, of good moral character and demonstrated ability. Next Parks enrollment dates — January 4-5 — Winter Semester.

AIR FORCE ROTC

Complete your schooling — without interruption — and receive a commission as a Second Lieutenant in the United States Air Force Reserve.

For additional information fill out and *Mail this Coupon TODAY!*

**PARKS COLLEGE
OF
ST. LOUIS UNIVERSITY**



2101 CAHOKIA ROAD

EAST ST. LOUIS, ILL.

PARKS COLLEGE OF SAINT LOUIS UNIVERSITY
2101 Cahokia Road, East Saint Louis, Illinois

I am interested in:

☐ Air Transportation

☐ Aeronautical Engineering

☐ Aircraft Maintenance Engineering

Name.....Age.....

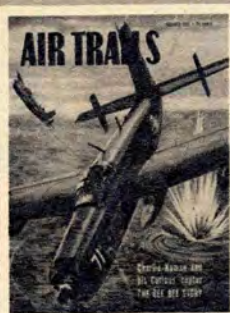
Address.....Zone.....

City.....State.....

AIR TRAILS

THE LEADING MAGAZINE OF AIR PROGRESS AND AEROMODELING

October
1951
Vol. 37, No. 1



Cover: AF-25 Grumman
Guardian—Alfred Owles

Editor: Albert L. Lewis. Art Director: W. F. Tyler. Technical Editor: Alexis Dawydoff. Editorial Production: Carl Happel. Editorial Assistants: Rose Borello and Rosalba Accardi. Correspondents—Washington: Kendall K. Hoyt; West Coast Modeling: Dick Everett.

STREET & SMITH PUBLICATIONS, INC.

President.....Gerald H. Smith
Executive Vice President.....Ralph R. Whitaker, Jr.
Vice President and Secretary.....Arthur P. Lawler
Treasurer.....Thomas H. Kaiser

Walter J. McBride, Advertising Mgr., 575 Madison Ave., New York 22; Frank C. Smith, Mid-Western Adv. Mgr., 230 No. Michigan Ave., Chicago 1; West Coast Advertising Representative, Kimball, Menne Co., 1052 W. 6th St., Los Angeles 17, California.

AIR TRAILS published monthly by Street & Smith Publications, Inc., at 575 Madison Ave., New York 22, N. Y. Entered as second class matter at the post office at New York, N. Y. Authorized as second class mail Post Office Dept., Ottawa, Canada. Copyright, 1951, by Street & Smith Publications, Inc. 25c per copy—\$2.50 per year, \$7.50 per year in countries of the Pan-American Union; \$3.50 per year in Canada; \$10.00 per year elsewhere. This issue is Vol. XXXVII, No. 1. Please advise us if you move; allow four weeks for change of address. Give old and new address when notifying us. Subscription correspondence should be addressed to Subscription Dept., Street & Smith Publications, Inc., 304 E. 45th St., New York 17, N. Y. All characters used in fiction and semi-fiction stories in this magazine are fictitious. We cannot accept responsibility for unsolicited manuscripts or art work. All submissions must include return postage. Printed in U.S.A.

FOR THE READER

- 8 Plane Talk
- 10 R-C Roundup—Howard G. McEntee
- 12 Air Notes
- 14 Airmen of Vision
- 16 Western Prowlers
- 19 Charlie Kaman and His Curious 'Copter
- 22 Air Progress: Gee Bee Story—Rolf
- 24 National Soaring Championships
- 26 Man-Monitored Missile
- 28 American Model Championships
- 32 Rumpler Taube—Ted Enticknap
- 36 The Fling—Slade & Hasselbach
- 40 Dummy Lifter—Bob Buragas
- 44 Wee Whizz Wagons
- 47 Dmeco's All-American Senior
- 48 F-B's Vampire
- 49 Master Modelcraft's Howard Ike
- 50 Joy's Pee Wee Pup
- 54 Dope Can
- 58 Record Review: Outdoor Cabin Model
- 60 Questions and Answers
- 62 Western R-C
- 66 Channel Wing Model—L. W. Christensen
- 68 Scale Trio
- 70 Sketchbook—Drawings by Thomas
- 72 Western Roundup—Dick Everett
- 76 Showcase

FROM THE READER

All communications to the editorial offices should be addressed to Air Trails, 304 E. 45th St., New York 17, N. Y.

Anybody Seen My Wakefield? . . . I need some help in trying to locate a lost model. My brand-new Wakefield disappeared straight up on its fourth test hop with only two hundred turns in the motor. The ship weighed 9½ oz. and was a twin-rudder job covered with blue, yellow and red tissue.

The model had neither my address nor a dethermalizer because I didn't think they were necessary on such a heavy model with only two hundred turns in the rubber. It went in an easterly direction from Staten Island and the thermal that took it would have lifted a barn door.

The model featured a removable prop, drawings for which I have sent to "Sketchbook" as possible interest to modelers who like to experiment with gadgets.

Would like to hear from readers in the Brooklyn, Long Island area who may know the whereabouts of this ship.

Tom Matterfis, Jr.,
62 Bush Ave., Staten Island 3, N. Y.

Speak Up, Brooklyn & Queens! . . . I am located in a town which seems to lack any model builders to the best of my knowledge. I wonder if you might be able to assist me in finding any in my section of Woodhaven (Queens) or nearby Richmond Hill, Jamaica or Brooklyn.

I am thirty years old and would like to meet interested fellow model builders near my age. I am interested mainly in free-flight but have done some work in control-line flying.

John Marotta,
75-12 Jamaica Ave., Woodhaven 21, N. Y.

South Africa Needs Plans . . . Would it be possible to inquire of your readers whether they could oblige me with full-size, detailed plans of flying scale models of twin-engined and four-engined transport, passenger and war planes, suitable for radio-control?

G. D. Louw, 103, MacWilliams St.,
Venterspost, Transvaal, South Africa

Names of Aces . . . I see by letters occasionally published in your magazine, from readers, great controversy on the subject of "Air Aces." I find them all very exciting.

I've been collecting data on "Aces" for 12 years, both W.W. I & II. My greatest difficulty is getting the names of U.S. pilots, USAF, USMC and USN. There are no sources of information in this part of the world to which one could turn.

It's for that reason that I would like to ask your readers to help me.

Patrick J. Cassidy, Jr., 16 Cretoria Rd.,
Chingford, London E. 4, England

Half-A Paradise . . . I have been reading your swell magazine, off and on, for about three years. I enjoy the articles, Airmen of Vision page, the swell plans and designs, and all the rest of the magazine.

After looking through some past issues, I came upon the May, 1950, magazine and noted the "½A" Dawson Special. The plane interested me especially because I am trying to organize a neighborhood "Half-A" team racing club. We might use it, in addition to the Long Midget (Monogram), for our races. The only limitation we have thought of so far is that of engine size. We

will probably rule out anything larger than .05 cubic inch displacement. This will make possible the use of some of the smaller and more economical powerplants which the manufacturers are now producing.

The weather here in Salt Lake City is just "what the doctor ordered" for flying small planes. After the middle of April, there is little or no breeze and the weather is most always good. To add to the perfect setup, there are 2 large schoolyards, both amply spacious for U-control or racing cars. Could anyone ask for better conditions?

Nick Panas, Salt Lake City, Utah.

New Stunt Rules? . . . I have been an active modeler for ten years and have been flying stunt since '47. I would like to present here the best idea that ever occurred to me on how to improve the precision acrobatic rules. I think that due to higher performing glow engines and hotter fuels the stunt pattern is getting much too simple. I have given much thought to the bonus point system and also adopting the Mirror pattern, but both have disadvantages. Why not employ the system used at Miami to judge the big ones? In other words, take a pattern like the Mirror pattern and allow the contestant so many minutes (five for instance) to complete as many maneuvers as possible. Allow the contestant to choose his own sequence of maneuvers. Line length would have to be standardized.

This type of flying would place a premium on speed and turning radius of the model, a smooth running engine, and a good flyer with quick reflexes. This way the maneuver could be judged in the ordinary manner and there would be no quibbling over line angle or in the bonus point system. The ship would just have to fly fast and turn tight to win. I know by now you are thinking that most builders would go back to the larger engines but not so if engines up to .30 cu. in. were allowed 60 ft. of line and above .30, 70 ft. of line. There are "bugs" in any idea and I can see several in mine, but I think it would be an improvement.

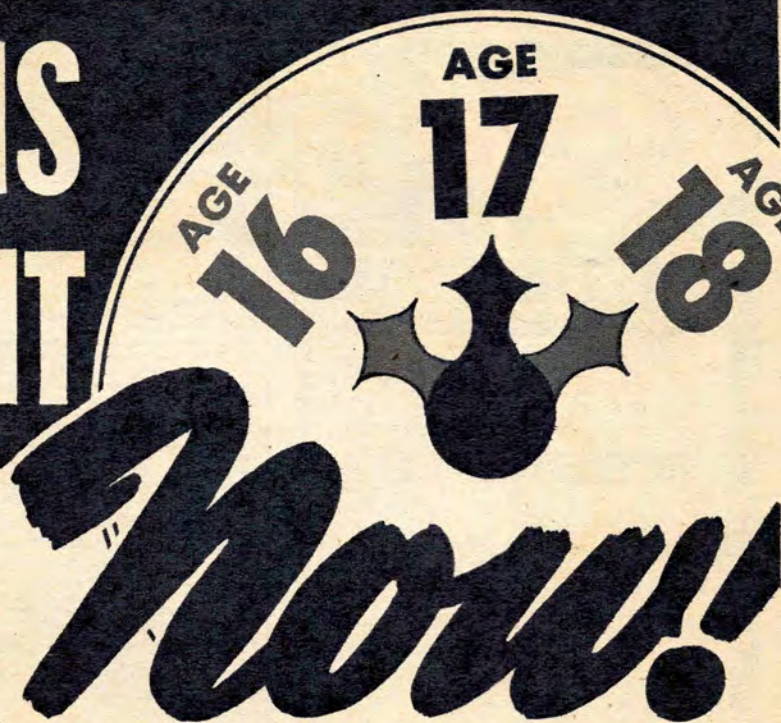
Kenneth Fox, Alto, Texas

More Radio Control . . . First let me congratulate you on your wonderful magazine. It has just the right balance between full-size and model aviation. I particularly like Douglas Rolfe's Air Progress. However, I think you put too much emphasis on ½A; maybe I'm biased but I could do with more models and articles on radio-control. I've just completed a 5 ft. R/C ship with an Ohlsson .23 with 2-speed ignition. The receiver is a lightweight with an XFG1 valve. Total weight of radio equipment need only be 7 ozs. but I'm putting in heavier batteries.

In your magazine I often see photos of long processing queues. Surely this could be avoided by having two or three officials going round and making a random check of any models they think are underweight. They should check all high-place models. Any not qualifying should be disqualified from contests a year; it's tough but it would keep the models up to specification.

M. Dilly, Kent, England.
(Continued on page 9)

....TIME IS IMPORTANT



RECOMMENDATIONS

Established in 1929... Cal-Aero Technical Institute is one of the oldest, largest and most distinguished Aviation Schools in the world.

Leaders in all phases of Aviation are among Cal-Aero graduates. 26,000 pilots and 8500 technicians trained for U.S. Military Air Forces—8500 civilian graduates. Cal-Aero Engineering graduates are eligible for OFFICER CANDIDATE, AIR FORCE and NAVAL AVIATION CADETS. APPROVALS: — E. C. P. D., Nat'l. Council of Tech. Schools, C. A. A., Calif. State Bd. of Education, U.S. Immigration Service, Aircraft Industry. NOW AGAIN—Cal-Aero is one of the first to train a large group of Technicians for the U.S. Air Force.

What better recommendation could a school have?

Cal-Aero is an independent subsidiary of Grand Central Aircraft Co., world's largest facility for maintenance and modification of every type aircraft.

IS THE TIME FOR DECISION AVIATION CAREER

ESSENTIAL INDUSTRY needs **TRAINED MEN** and needs them badly — **NOW!**

THE AIRCRAFT INDUSTRY, both **VITAL** and **ESSENTIAL** offers great opportunities for **TRAINED MEN**.

AERONAUTICAL ENGINEERING
MASTER AVIATION MECHANICS
JET ENGINE Maintenance and Overhaul
MAXIMUM TRAINING IN MINIMUM TIME

Upon graduation you can step right in an Aviation job without break-in...and at **TOP PAY**. **CAL-AERO GRADUATES ARE IN DEMAND.**



BE WISE · PROTECT YOUR FUTURE

**TRAIN IN
SUNNY SOUTHERN
CALIFORNIA**



APPROVED FOR VETERANS

DON'T DELAY · MAIL TODAY

CAL-AERO TECHNICAL INSTITUTE, Grand Central Air Terminal, Glendale 1, Calif. • Send full information and free catalog, immediately.

☐ **AERONAUTICAL ENGINEERING**

☐ **MASTER AVIATION MECHANICS**

☐ **JET ENGINE—Maintenance and Overhaul**

☐ **HOME STUDY COURSES**

☐ AERONAUTICAL DRAFTING ☐ AIRCRAFT BLUEPRINT READING

☐ STRESS ANALYSIS AND DESIGN

NAME _____

ADDRESS _____

CITY _____

AGE _____

HIGH SCHOOL ATTENDED _____

ZONE _____

STATE _____

Check one: ☐ Veteran ☐ Non-Veteran

GRADUATED: YES ☐ NO ☐

AT-10

6

Complete FLYING OUTFITS

WORTH TWICE OUR COMBINATION PRICE!

WE WILL SUPPLY
A complete flying outfit with your own choice of any advertised engine or plane—and save you money. Just order from us or write for price.
IF IT'S ADVERTISED, WE HAVE IT

IT ISN'T OFTEN that you get the chance to buy, at less than half price, a U-Control Plane, Engine and All-Accessory Outfit with your own choice of a well-known **FACTORY ASSEMBLED** ignition or glo engine. Everything carries the famous America's Hobby Center as well as the manufacturer's guarantee. Even if you are a beginner, you won't have trouble building and flying any of these flying outfits, full-size plans of any easy to-build and fly plane, every accessory you will need, complete instructions, etc., etc. If you are an old-timer at building and flying model planes, we don't have to tell you what these bargain outfits are really worth.

Thousands of these complete units have already been sold. They have met with enthusiastic reception because they represent a value unheard of before in the modeling field. The price is so low that we cannot sell to dealers. You really save from \$10 to \$12 by buying the complete, packaged unit—everything is engineered by experts for a perfect flying combination.

YOUR OWN CHOICE OF ENGINE, PLANE, PLUS ALL ACCESSORIES, INCLUDING: Correct size finished propeller • 3-way plug wrench • Presto Engine starter with handle and card • Speed indicator tables • Log Book • Motor cover • Spark or glo plug with gasket • Complete engine instructions • 24 page Gas Engine Theory Manual • Engine adjustment chart • Metal fuel tank and gas line • Metal Battery box • Wilco Quality Coil • 12" Hi-tension lead wire and end clips • 18" insulated ignition wire • Ignition slide switch • Coil holder and mount • Everlast condenser • SAE #70 Oil • 4 ignition wiring lugs • Spark plug gauge set • 2 plane identification tags • 72 insignias • **GIANT** book on Control-liners, How to build and fly them • Cement • Sandpaper • "Pro" all-metal knife and blade • Metal bellcrank with bolt, nut and washer • Elevator horn • Elevator hinges • Lead-in wire • Push-rod wire • U-Control handle • 100 ft U-Control stainless steel wire reel • Membership in Modelcrafters of America • 64 pg 2-color catalog • Postage • Packing • Insurance. Ignition parts not needed with glo-engine not included.

YOU WON'T GET OTHER BARGAINS LIKE THESE!



BUZZ
Ignition
or glo
\$8.50



JUDCO
Ignition
or glo
YOUR CHOICE \$10.00



MCCOY 19
GLO
THOR
Ignition
MOHAWK
CHIEF
glo
YOUR CHOICE \$12.50



MCCOY 19 Red.
Ig. or glo
or 29 Glo
OHLSOON
19 or 23
Deluxe GLO
YOUR CHOICE \$13.50



OHLSOON 29
Ignition
or glo
PHANTOM
Ignition
or glo
YOUR CHOICE \$15.00



TRAIL BLAZER Model Plane with carved lower fuselage-half, fully formed aluminum upper half. Balsa sheet wing, no tissue used. Balsa tail surfaces, plywood engine mount. Schematic drawings with step-by-step plans. Rubber wheels, detail paint schemes. 24" wingspan.

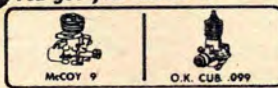
PLUS ALL ACCESSORIES LISTED ABOVE

NEW .099 UNITS

Includes all 3 items

For ease of assembly, for trouble-less operation and for real effortless U-Control flying, these units are the answer to the modeler's dream. Even the beginner will have no trouble in assembling the outfit in one evening and be completely ready to fly the next morning.

1 You get your choice of



2 PLUS Your choice of 2 completely prefabricated kits



3 Plus all accessories

COST ONLY McCoy 9 Glo Outfit **\$10.95**
O.K. Cub .099 Outfit **\$ 9.95**

AA FLYING OUTFITS

These are the new pint-size glo engines that are so tiny (1 to 1 1/2" across) but develop plenty of power for free-flight or U-control flying.

Your own choice



Plus your choice of planes:
All planes prefabricated, easy to build and fly



Plus all accessories

5 ACES OUTFIT

The biggest bargain we have ever offered. Over \$10.00 of merchandise for only \$5.55.

1 YOUR CHOICE OF



2 PLUS your choice of 4 prefabricated Scientific 22" span u-control planes.



3 PLUS ALL ACCESSORIES

COST ONLY With O.K. Cub **\$9.95**
With Spitzzy **\$5.55**

LARGEST BARGAIN OF THE YEAR

AEROMITE \$9.95

A really beautiful red plastic job. 17" wingspan with Baby Spitfire engine, prop spinner, tank, etc., already installed. Shock-absorbing spring-steel landing gear, Jim Walker U-control for precision and stunt flying, plastic control handle, nylon control cord.



A. J. FIREBABY \$7.50

Beautifully finished and painted, even fuel-proofed. 19" span. Includes new "slow-motion" propeller and engine.



READY-TO-FLY OUTFITS

All you do is take the plane out of the box, fill the tank, and FLY. You don't have the fun of building—all the fun's in the flying. Just nothing to build. And to fly, all you'll need extra is fuel and battery. All U-control.

BUSTER \$7.95

Scale model of Whitman Special. 12 1/2" span. K & B Torp Jr. engine already installed.



DOUGLAS NAVY SKYRAIDER \$9.95

All plastic model including K & B Torp Jr. engine. Landing Gear with aluminum wheels, decal, tank, spinner, etc., etc. Includes nuts and bolts for minor assembly.



YANK \$5.95

23" span championship model. Finished in two colors and fuel proofed. Equipped with O.K. .039 engine and all accessories.



**SOLDIERS!
SAILORS!
MARINES!**

Orders placed through us get special attention. We understand your problems and take special care of your orders. Or send for our **SPECIAL SERVICES DATA**



\$6.95

COMPLETE RACE CAR COMBINATION OUTFIT

NEW! Scientific "HALF-pint" race car, complete with direct drive PLUS O.K. .049 engine PLUS all needed accessories. Five minutes after you open the package, you can race this car on any smooth surface, even your own backyard or cellar. Speeds over 40 miles per hour. COMPLETE except for fuel and battery. Car alone \$2.95.

How To Order Send remittance in full (we prepay packing and insurance)

- Dept. TC-101 156 West 22nd St., New York 11, New York
- Dept. TC-101 55 E. Washington Street, Chicago 2, Illinois
- Dept. TC-101 Rm. 230, 742 Market St., San Francisco 2, California
- Dept. TC-101 Rm. 306, 427 Carondelet St., New Orleans, La.
- Dept. TC-101 Gas & Electric Bldg., Denver 2, Colorado

or send \$1 and we ship collect C. O. D. same day for balance. Address your order to us at your nearest branch office.

America's Hobby Center INC

A GENERATION OF FAIR DEALING GUARANTEES YOUR SATISFACTION



Get a "HEAD START" with NORTHROP Training!

Aeronautical Engineering
Aircraft & Engine Mechanics

Get a "head start" in your Aviation career with Northrop training. Qualify **FASTER** for a profitable, permanent, interesting future! **NORTHROP TRAINING** can bring promotion and bigger pay YOUR way. A Northrop Graduate is backed by the prestige of the famous Northrop name—he has a "head start" to opportunity and success in aviation.

Excellent Training Facilities

At Northrop you'll use the newest training aids—live jet engines, wind tunnel, single and multi-engine aircraft, outstanding laboratory and shop equipment. Northrop instructors keep up-to-the-minute with the rapidly advancing science of aviation. You'll learn thoroughly in minimum time!

Military Advantages For You

In civilian or military life, Northrop training counts. For example, NAI engineering graduates are qualified educationally to become Air Force or Naval Aviation Cadets or Officer Candidates. Regardless of your present status, write today for complete information.



Northrop
Aeronautical Institute
1533 East Broadway, Hawthorne
Los Angeles County, Calif.

Approved for Veterans
SEND FOR FREE ILLUSTRATED CATALOG
Gives details of instruction—shows
pictures of training equipment you will use

NORTHROP AERONAUTICAL INSTITUTE
1533 E. Broadway, Hawthorne, Los Angeles County, Cal.

Please send me immediately the Northrop catalog, special military information and employment data, and schedule of starting dates of classes. I am interested in:

☐ Aeronautical Engineering ★ Aircraft & Engine Mechanics ☐

Name _____ Age _____

Address _____

City _____ Zone _____ State _____

☐ **VETERANS**—Check here if you are entitled
to training benefits under the G.I. Bill.

10

PLANE TALK

■ Among the bombs dropped over Korea, there appeared a new kind remarkable for enemy casualties—since it killed none at all. Yet it knocked thousands out of the war.

This Air Force weapon is the leaflet bomb which bursts in the air to shower advice for surrender. Though the idea is not new, the Air Speak that goes with it—the great voice from on high—makes the airborne part of psychological warfare a military innovation until recently a secret.

Though nine-tenths of the Red troops can't read, they can understand cartoons hinting good treatment for giving up, or else no end of bombs. So that nothing is left to imagination, comes the Air Speak—the voice from a mile above, shouting directions in the native tongue.

The Reds have quit in droves. Of 200,000 who surrendered, fully a third are credited to the persuasion of "Syke Air."

Results have led Air Force to fast expansion of this venture.

OLD CHINESE CUSTOM

Of course the "war of nerves" is as old as Gideon who broke pitchers and waved lights. Worrying the foe with firecrackers, paper dragons, burning stenches, and yells was an old custom of the Chinese who now have their awful bugles. Perhaps their belief in these things makes them the more susceptible to our adaptations, which are modern and scientific.

Though we have used propaganda and psychology of sorts in all wars, it was not until World War II that the term "psychological warfare" was used. We and our Allies dropped some 6 billion leaflets over Western Europe. In Japan, bomb warnings were scattered over cities to scare the workers out. Looking back, some authorities think this would have been good over Germany. It is to the credit of the Air Force that, even during the shattering demobilization when funds were so scarce, a planning staff for psychological warfare was kept in the Pentagon. The Army kept one too.

After the Korean War began, a special joint staff, representing all the services, was assembled in Tokyo and units were placed in the field. The staff job is to prepare literature and pictures—not general arguments

from the back files but fresh material geared to the immediate. On simple offset presses, leaflets were printed by the bale. The leaflet bomb now in use holds about 30,000. They are packed by native girls in a series of spirals. The bombs are set to explode at a certain distance above ground so that the pages are strewn to the winds.

Bundles may also be tossed out of airplane doors, on strings to pull the wrapper open.

The Air Force makes all the deliveries. Some 14 million leaflets per week have been the usual output in Korea—a heavy print order.

THE VOICE

Two Douglas C-47s, specially equipped, have done the work. One is named "The Voice" and the other "The Speaker."

The Air Speak is a terrific thing—a bank of 36 loud speakers hung beneath the airplane nose with a metal baffle around them for streamlining. The set operates on 2,000 watts output. This horn is effective at 6,000 feet, which is high enough to avoid much danger from enemy fire.

Here is a typical incident. An Army liaison plane, directing artillery fire, asks the gunners to stop and talks by radio to one of the Air Speak C-47s. From these directions, the Chinese are told that if they will drop their guns and march down the road, they will be well treated. Otherwise the shelling will begin again. At once, dozens get up and are out of the war. For those who choose to (Continued on page 59)



M16M1 cluster adapter being loaded at Yokohama, Japan, with 22,500 (5"x8") psychological warfare leaflets wrapped in spirals.

6 MONTHS AT SPARTAN Before Entering Service CAN BE WORTH YEARS TO YOU LATER...



IF YOU ARE GOING TO THE SERVICE, 6 months training, at SPARTAN, will prepare you for faster advancement. If you have

this training, before you go into Air Force or Navy Air Training, your Service experience will be infinitely more valuable to you.

When you get out of the Service you won't have to go to school. Your training at SPARTAN will be worth thousands of dollars in earnings to you and you will save years of valuable time. Don't overlook the best opportunity of your life!

The ability of SPARTAN to train young men for aeronautical careers is proven by the selection of this School again by the United States Air Force.

WRITE IMMEDIATELY FOR INFORMATION that will show you how thousands of young men have become successful — in the Service and in Civilian Aviation — by training at SPARTAN.

SPARTAN A UNIVERSITY OF AVIATION

SCHOOL OF AERONAUTICS
MAXWELL W. BALFOUR, DIRECTOR
TULSA, OKLAHOMA
COLLEGE OF ENGINEERING
ADDRESS DEPT. AT-101

MARK AND MAIL
NOW

Maxwell W. Balfour, Director
Spartan School of Aeronautics Dept. AT-101
Tulsa, Oklahoma

Please send your free Catalog immediately.

Name _____ Age _____

Address _____

City _____ State _____

Indicate which of these branches interests you.

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Flight | <input type="checkbox"/> Instruments |
| <input type="checkbox"/> Mechanics | <input type="checkbox"/> Aeronautical Engineering |
| <input type="checkbox"/> Radio | <input type="checkbox"/> Airline Maintenance Engineering |
| <input type="checkbox"/> Meteorology | <input type="checkbox"/> Flight Engineer |

Spartan is approved for training under the G. I. Bill of Rights

R-C

Around the modelplane radio-control circuit . . . comment and reports by a leading R-C authority

■ This seems a good place to answer questions on R-C that continually reach AIR TRAILS. Those most commonly asked, and the answers, are these:

(1) Is a license needed for R-C? Definitely; even for Citizens Band operation (on 465 mc.) an F.C.C. license is mandatory, but, on this band only, you need take no code or theory test.

(2) How can I get a license? Send 50¢ to Amer. Radio Relay League, West Hartford 7, Conn., for "License Manual"; gives all info needed for any class of amateur license, including Novice Class just announced. Novice test is simplest of all, but good only for 1 year, non-renewable. All other classes last 5 years, but exams are tougher. Code is best learned by two or more studying together; code-sending machines can be rented at low cost. Code transmissions for learners sent out regularly by W1AW, A.R.R.L. official station. Get a local amateur to help you; check on local radio clubs—they usually have beginner classes.

(3) Can I design and build my own R-C equipment? Not recommended unless you are an experienced radio technician. Build from magazine articles or from commercial R-C kits.

(4) Must I have an A.M.A. license to fly R-C? Not mandatory unless you're interested in fly-

ing at AMA-sanctioned meets.

(5) How many surfaces on plane must be radio-operated? Large majority of R-C planes have rudder control only. Most contests are won with this control; with experience you can do whip stalls, loops, spiral dives, wing-overs, etc. Addition of elevators means more flexibility, of course, but don't forget—the more equipment you use, the more can go wrong. Many R-C veterans feel best combo is rudder plus 2-speed motor operation; allows taxiing on ground, touch-and-go landings, really wicked stalls, etc.

(6) What is average weight of simple R-C installation and what size plane should I use? Rudder-only set-up using escapement will weigh about 16 oz, including fair-sized batteries; 5½ to 6 ft. span ship with Class B engine is good starting size.

(7) What are main general types of R-C now in use and what are their advantages? Escapement control most widely used is simple, light, gives neutral-right-neutral-left control sequence; motor cut-off easily added with a thermal switch. Proportional control requires more complication at transmitter; gives left or right movement in any degree needed and without sequence. Audio-tone operation requires rather heavy receiver but allows very flexible (Cont'd on page 15)



Western Air Lines pilot-captain Dick Schumacher achieved reputation as rubber and gas model designer, has now switched with great success to R-C. This is 42" span, 24 oz. midget.



FIREBABY Flight Line

Jim Walker
FIREBABY

Ever try team racing? Just get together three to six fellows with A-J Firebabies...draw a ten-foot circle on the ground and rev up the motors. Each man takes position in the circle. At the starter's signal...zoom...all planes take off together. All pilots must stay within the circle and the first man to finish the required number of laps wins!

Buy it ready to fly, complete with flying lines and full instructions for flying and stunting. Wing span 19 in., weight with motor 3 oz. All parts are finished, painted, fuel-proofed. Just slip them together, bolt on wing and motor, "gas up" and you're ready to take off!

Jim Walker



1166 N. E. 31st AVE. • PORTLAND 12, ORE.



\$7.50

with motor
\$2.50 without motor



A-J FIREBALL

Original U-Control plane. High maneuverability. Kit includes control handle, flying lines and wheels.

\$6.95



U-REELY CONTROL

Keeps flying lines off ground and ready for instant use. Take-off unassisted and ree in to land.

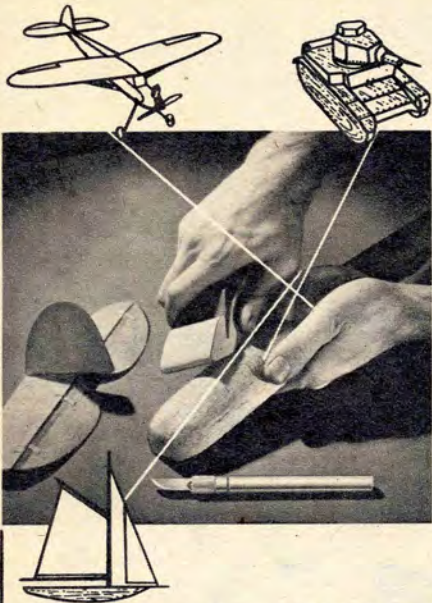
\$7.50



FUEL REGULATOR

Supplies fuel under pressure in any position until tank is dry. Complete with Pressure Fuel Tank.

\$2.50



make your **HANDS** **MORE CREATIVE** with **X-acto Knives and Tools**

X-acto precision knives and tools give untrained hands the confidence that makes them creative.

X-acto originates attractive handicraft projects... goals easily accomplished. The finished product gives you the pride of achievement that comes only with doing something well with your hands.

For their hobbies... boat whittling, model airplanes, woodcarving, leathercraft, model railroads or any other handicraft... master craftsmen and hobbyists select "designed-for-the-job" X-acto knives, tools and handicraft kits. X-acto offers the complete line of handicraft knives, interchangeable blades, tools and attractive kits.

From 25¢ to \$30.—at dealers everywhere



No. 82 X-ACTO KNIFE CHEST — \$4.20

Send 15¢ to cover postage
for our new illustrated
28-page Catalog.



x-acto®

X-acto Crescent Products Co., Inc.
440 Fourth Avenue, New York 16, New York

air notes

AVIATION TODAY
AND TOMORROW

MOSQUITO KILLERS, lightplanes armed with machine guns and rockets, being considered as weapons against slow-flying enemy liaison planes and small ground targets. Both Beech and Temco have come up with models armed with cal. .30 mgs. . . **NORTHROP F-89** all-weather fighter in large-scale production at Hawthorne, Calif. plant. Late model does away with protruding mass balance on elevator, has smooth horizontal tail. . . **WINGS** of latest model Lockheed F-94C so thin that leading edge has no ribs; integral stiffeners, replacing ribs, are machined into the thick 75ST stock.

DOUGLAS SKYROCKET, high-speed research plane, flew higher and faster recently than Bell X-1. Figures on performance not released, but general guess is that its pilot Bill Bridgeman reached speed in neighborhood of 1200 mph, altitude above 65,000 ft. . . . Landing speed of Skyrocket is around 190 mph. Wears out one set of tires per landing. . . . **ONLY 87 B-36s** are ready for action in the USAF, according to Brig. Gen. W. C. Sweeney, Air Force Plans Officer. Sixty or so more are in process of modernization.

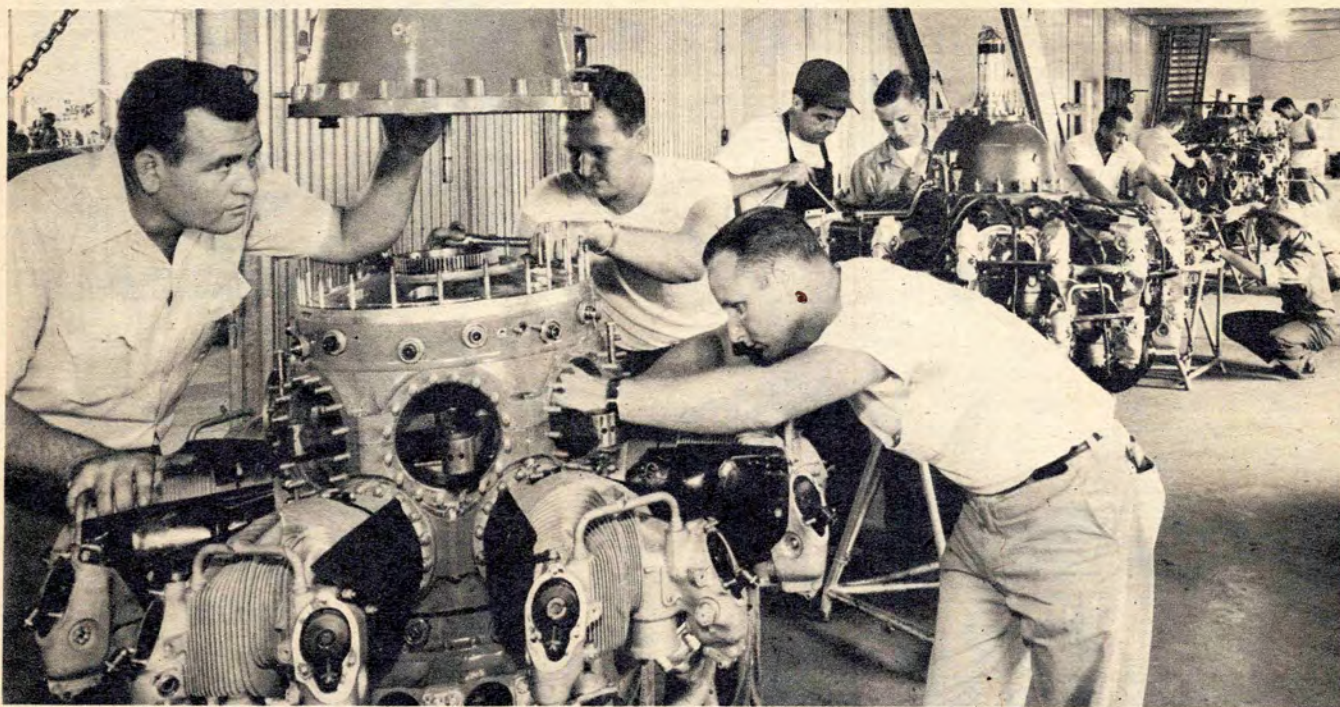
A **TURBO-PROP CARGO PLANE** designed by Lockheed Aircraft Corp. recently won AF design competition for this type. Ship carries Lockheed designation L-206, will look somewhat like Chase C-123. . . . **TEN TON** bulldozer successfully parachuted out of a Fairchild C-119 cargo plane. . . . **BEECHCRAFT'S** new twin-engine light transport has been ordered in quantity by USAF. Will be used as trainer, designated T-36. . . . **KAISER-FRAZER CORP.** has purchased 49% of Chase Aircraft Co's stock. Chase C-123 to be built at the K-F Willow Run, Mich. plant. . . . **COL. DAVID C. SCHILLING**, who flew a Republic F-84E from England to Maine nonstop using in-flight refueling, awarded the Harmon International Aviation Trophy. . . . **JON D. CARSEY** of Dallas, Tex. was elected for second consecutive year as president of Soaring Society of America.

FIRST DC-6B, enlarged version of the popular airliner, to enter the service of a foreign airline was recently flown overseas to Switzerland where it was delivered to its owner, Swissair. . . . **NORTH AMERICAN FJ-2 Fury**, Navy version of the F-86E Sabre, will be built in NAA's Columbus, Ohio, plant. . . . **ACCORDING TO CAA**, there are 5,000 war surplus and other converted aircraft used in dusting, spraying, seeding and other agricultural operations. Half a billion pounds of chemicals, it is estimated, have been spread by airplane over farmlands of the U. S.

CANADAIR LTD. of Montreal is building 20 North American F-86E's per month for the RCAF. . . . **AMONG FIRST** to be ordered on flood relief duty in Kansas area was Kansas Wing of Civil Air Patrol. . . . **SPECIAL PAINT**, developed for high-speed aircraft, can add as much as 20 mph to a jet plane. . . . **BINGHAMTON, N. Y.** recently opened its new \$4 million airport. Field has two 5,000 ft. and one 5600 ft. runways, is serviced by Robinson Airlines. . . . **PRATT & WHITNEY** has licensed Continental Aviation & Engineering Corp. to build its 600 hp Wasp piston engine for military aircraft. This engine used in the T-6 trainer. . . . **CONVAIR'S** Fort Worth division employment has reached World War II peak. Total figure over 30,000. . . . **WORLD WAR II** hero Admiral H. B. Sallada (U.S.N. Retired; was responsible for capture of the Mariana Islands) has been named plant manager of Fairchild Aircraft Division, Chicago plant. . . . **700 RACING DOGS** transported by air via Pan American Airways cargo Clippers to dog tracks in Cuba. . . . **MARTIN P5M-1** Marlin, anti-submarine flying boat, recently made initial flight. Substantial number on order by Navy.

FOUR Pan American World Airways oldest pilots, Captains Basil Rowe, Robert H. Fatt, Roy Keeler and John T. Rogerson have logged an aggregate of 93,000 flight hours, more than any other four men in world.

AVIATION OFFERS SECURITY!



The clear picture for your future is in Aircraft and Engine Mechanics! Dallas Aviation School opens the door to training and instruction . . . to avail yourself of the specialized technical skills that qualify you for a secure career in the most permanent of all fields . . . Aviation! Dallas Aviation School, recognized and approved by the United States Civil Aeronautics Administration,

offers training supervised and conducted by licensed CAA Mechanic-Instructors.

The time to begin your career in Aviation is now . . . and the most profitable way to start is by writing today for complete information about DALLAS AVIATION SCHOOL . . . one of America's leading technical institutions!

Send TODAY for this interesting, illustrated booklet . . .

Registrar, Dallas Aviation School
Love Field, Dallas, Texas, Dept. AT1051

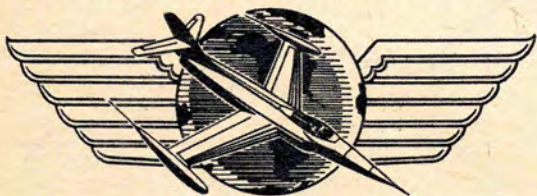
Please send me your new 1951 catalog and complete information about enrollment

Name _____ Age _____

Address _____ ☐ VETERAN ☐ NON-VETERAN

City _____ State _____

(PLEASE PRINT ALL INFORMATION)



DALLAS AVIATION SCHOOL

AN AFFILIATE OF AVIATION ACTIVITIES COMPANY

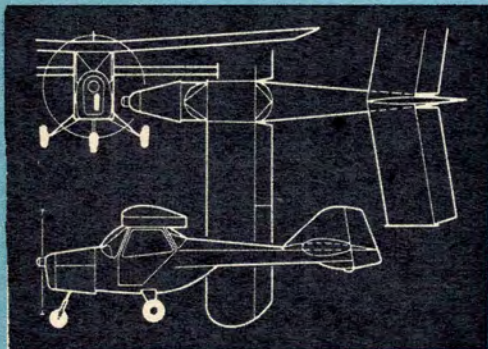
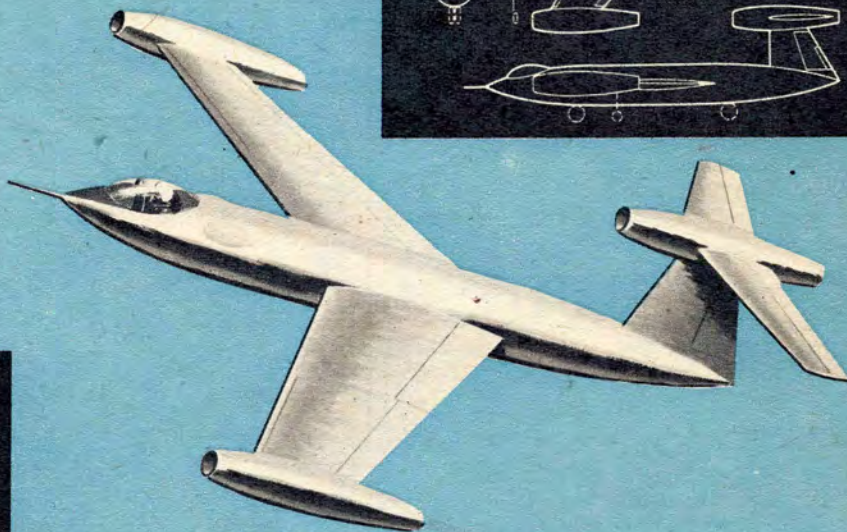
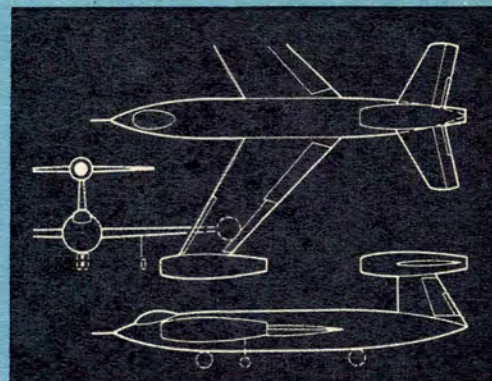
LOVE FIELD • DALLAS, TEXAS

1926 ★ TWENTY-FIFTH ANNIVERSARY YEAR ★ 1951

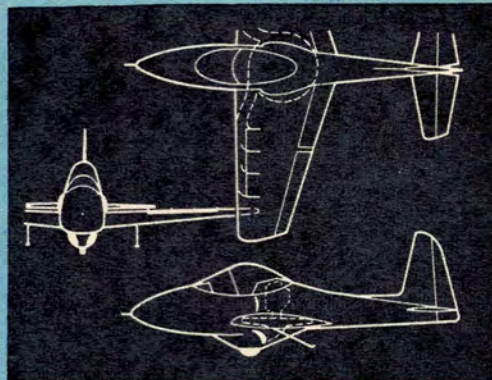
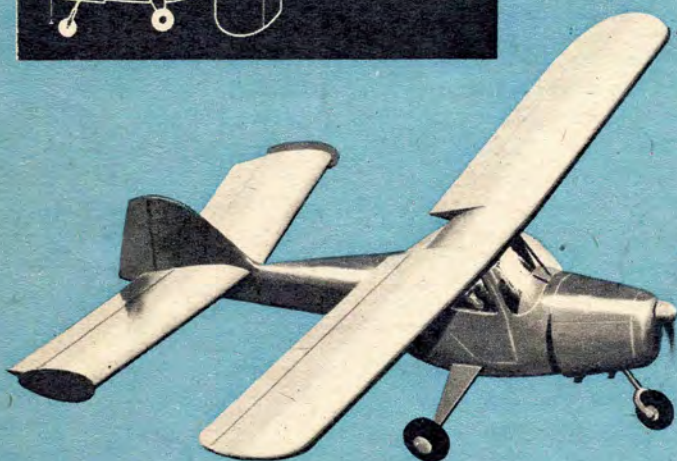
Airmen of Vision

DESIGN COMPETITION

Best design of the month, a three-jet fighter-bomber by Lt. Roberto Sanchez Davalos of Mexico City, Mexico. Plane features swept-forward wing with a bi-convex airfoil, slats and spoilers. Interesting is location of the third jet, high on vertical fin. May present structural problems. Span 50 ft., length 61 ft. Engines develop 5000 lbs. thrust each. Top speed 650 mph. Heavy armament in nose.



Tandem wing lightplane by S. Slangsrall of Strommer, Norway. Main wing has an area of 73.5 sq. ft., rear wing 46.5 sq. ft. This type of design gives good stability, slow stalling speed. Quite similar to the French Taupin lightplane of 1937. Powered by a 40 to 50 hp engine, it has a top speed of over 100 mph and lands at 28 mph.



Boundary layer control glider by S. O. Rider of Stockholm, Sweden. Boundary layer is sucked off through slots at leading edge of wing by means of engine-driven pump to rear of pilot's seat. Considerable increase of wing efficiency is obtained through this method, as lift coefficient is doubled. Span 18 ft.; double flap, and aerodynamic fences at slots.



Air Trails has opened its columns to those who are interested in presenting plans for "aircraft of the future." Rules governing the competition are as follows: Three-view sketches of the proposed aircraft will be required. These should be not less than 8 1/2 x 11 inches for the entire three-views. Give sketches of the complete airplane in three-quarter front and rear positions. Photos of a model of proposed design may be included. Information on power plant(s) estimated performance, dimensions, and explanations of any unusual features are required. Data as to age, occupation or schooling of the entrant will be welcomed by the editors and

Judges. The designs may be of any type: commercial aircraft, military planes (fighters, bombers, troop transports), planes for the private flyer and single-engine sporting or racing craft. The entry each month judged the most practical or of the greatest significance will receive an award of \$25. Payments of \$5 will go to the runners-up. Entries will not be returned and for that reason those participating should keep copies of all material submitted. Mail entries to Airmen of Vision, c/o Air Trails, 304 E. 45th St., New York 17, N. Y. Editors regret that because of large number of entries they cannot enter into correspondence on A. of V.

R-C

(Continued from page 10)

action of several control surfaces; seldom affected by interfering signals.

(8) I hear foreign R-C equipment made for the 50 mc. is being sold in U.S.—is this correct? English radio apparatus by Electronic Control Components may be had from American Telasco, Ltd., 55 W. 42nd St., N.Y. 18, N.Y. Another English line, made by Electronics Development, Inc. is available from Polks, 314 5th Ave., N.Y. 1, N.Y.

Guess that takes care of the questions for now—send them in, we'll answer 'em!

More R-C Clubs.

Linden, N. J. area—The Flying Circuits group sparked by Fran McElwee, Cliff Schiebel and other very active R-C flyers. Contact them at 1400 Kenyon Ave., So. Plainfield, N. J.

Another Jersey R-C group (no official name yet) holds meetings at the Modelcraft Shop, 30 Orient Way, Rutherford, N. J. There are about 12 members with 10 ships among them. One father and two sons team have three ships flying; Pop has a fully equipped machine shop, is making some tricky new gadgets.

Contest News. Just learned from Walt Good that R-C Exhibition held at National Capitol Model Air show was changed to full-fledged event with prizes. Winners were scored by greatest accumulated flight time—but no flights counted unless ship landed in area 150 x 400 ft. Flights by rotation, those over 10 min. counted only as 10 min; 5 min. allowed flyer to get in air after name was called. Here's a simple set of rules for C.D.'s who are worried about judging stunts, etc.: just a timer needed. Wonder who persuaded the sponsors to make this one a real contest?

May-June issue of A.M.A. publication, *Model Aviation*, had tremendous list of 143 sanctioned model meets; 88 of these list F-F events and R-C is included in 13. Not so good a percentage, is it? But at least it's much better from the R-Cers' standpoint than before. Interesting to note that most meets listing R-C are sponsored by Plymouth dealers; even though R-C is not an official Plymouth International Event, these dealers know a crowd-drawing event when they see one. Another interesting point—at several of these Plymouth preliminary meets, R-C is the only F-F event! More power to Plymouth, and may they eventually include R-C at the Internationals.

Only sanctioned meet listing R-C after Sept. 1st is Prop Spinners 10th Annual Northeastern F-F to be held Sept. 16. Write to Bill Fletcher, 8708 Grand Avenue, Elmhurst, L. I., N. Y.

Technical Notes. Remember that hook-up we gave last issue for motor cut? Walt Good and others use thermal cut-out to stop motor as desired. Thermal heater element connected directly across escapement winding. With 4-arm escapement, motor cannot cut no matter how long you hold a turn. To stop motor, just push transmitter button for 10 sec. (or whatever delay period cut-out is adjusted for). Nothing new about this, of course, yet few R-C flyers use the scheme and it works beautifully.

Recent tests with an XFG-1 receiver and a crystal-controlled transmitter on

(Continued on page 17)

for TEAM RACING or SPORT FLYING

that WINNING COMBINATION

SPEED and MANEUVERABILITY



SCIENTIFIC

LITTLE ACE

Team Racer

IT'S BRAND NEW!

COMPLETELY PREFABRICATED

EASILY ASSEMBLED IN ONE EVENING

• Here's a brand new team racer designed to keep you laps ahead of your buddies. Man... What Speed! The "LITTLE ACE" exceeds 76 m.p.h. when powered with an .099 engine, using standard prop and fuel. Even greater speeds are attainable with a spinner and special fuels. Ease of handling at high speeds enables the pilot to gain many laps by jockeying into good positions. The "LITTLE ACE" has everything—SPEED... MANEUVERABILITY... and LOOKS. It's styled after prominent full scale racers, featuring "cheek" type cowls to give it that "GOODYEAR" racer look.

"1/4" U-CONTROL MODEL FOR SMALL BORE ENGINES

SPAN	18"
LENGTH	13 1/2"
WEIGHT	5 1/2 oz.
AREA	54 sq. in.

\$195

BEGINNERS

.039 to .049 engines give you an easy to fly "Goat", ideal for your initial flight. And what a cinch it is to assemble!

SPORT FLIERS

.049 to .074 engines give you the perfect sport flyer. Moderately fast speeds and easy handling... exactly what you want!

SPEED MERCHANTS

.099 engines give you the speedy "team" or "proto" racer you want—one that combines speed and maneuverability with real class.

SCIENTIFIC

MODEL AIRPLANE COMPANY

113 A10 Monroe Street • Newark 5, N. J.

BUY FROM YOUR DEALER & SAVE 15¢ MAIL CHARGE

SEE THIS NEW SCIENTIFIC MODEL AT YOUR FAVORITE HOBBY SHOP



MEN OF THE HOUR are moving UP!



Thousands of Embry-Riddle trained engineers, mechanics, specialists and pilots are making rapid strides in today's booming aviation industry.

These men in the top jobs are undeniably proving that thorough, practical Embry-Riddle training is by far your quickest, surest road to success in aviation. Complete eight-month to two-year Embry-Riddle courses are tailored to practical aviation industry requirements.

The latest, most modern equipment (including jet engines), the finest instructors, the most complete aviation school campus anywhere, are all yours at Embry-Riddle.

If you are now a high school student, a graduate or a veteran, investigate at once the full advantages and tremendous career security of Embry-Riddle training.

If military service interrupts your studies, you're still a long way ahead of the crowd.

Join the Embry-Riddle Men of the Hour. Write for full information today.

4 Keys to Success!

AIRCRAFT & ENGINE MECHANICS
Our C.A.A.-approved school has a quarter-century aviation training experience. Learn fast with modern equipment, including jet... live aircraft, airline-size hangars.

A & E COMBINED WITH COMMERCIAL
Embry-Riddle combination training gives you unusual dual pilot-engineering ability.

AERONAUTICAL DESIGN AND TECHNOLOGY
Embry-Riddle's accelerated 26-mo. Aeronautical Design and Technology Course provides finest training available.

COMMERCIAL PILOT
Benefit from our experience with 30,000 students... best instructors and aircraft, year-round flying weather.

Embry & Riddle
International
SCHOOL OF AVIATION
MIAMI 30, FLORIDA

Dean of Enrollments - Dept 97
Embry-Riddle School of Aviation
MIAMI 30, FLORIDA
Please Print

NAME _____

ADDRESS _____

City _____

State _____ Age _____

I am interested in...

☐ A.&E. Mechanic

☐ Commercial Pilot

☐ Aeronautical Design and Technology

☐ A.&E. Combined with Commercial Pilot

☐ Flying Mechanic

Check One ☐ Veteran ☐ Non-Veteran

TRAIN IN MIAMI - AIR CAPITAL OF THE WORLD



Western Prowlers



■ From aircraft plants of the West Coast come these two heavyweight sluggers, the Northrop F-89 Scorpion (above) and the Douglas F3D Skynight (below), Air Force and Navy answers to enemy bombers eager to sneak up on us under the cover of night or bad weather. Both types weigh almost as much as the Douglas DC-3, as they carry

over 1000 lbs. of intricate radar and electronic equipment which helps to ferret out the invisible enemy intruder. The Scorpion is armed with six 20-mm cannons and is equipped with split aileron decelerator air brakes which permit it to descend from 40,000 ft. in a matter of a couple of minutes. The Skynight is a carrier-borne aircraft in the 600 mph class but capable of landing at slow speeds. It also is heavily armed and has a crew escape hatch in the belly of the fuselage. Both planes have two engines and carry a crew of two.

Let enemy visitors beware!



(Continued from page 15)

27 mc. showed extremely good operation with very low input. Trans. power was 12 ma. at 135 V. to a single 1S4 tube. Vertical antenna used at both trans. and receiver. XFG-1 likes very low capacity across tuned circuit (we used only 4.7 mmf. with a slug-tuned coil) for real sensitivity. Details of the entire outfit will appear in Air Trails.

Several R-C experimenters have tried idea of eliminating escapement and its battery by building unit right into a sensitive relay. Can be made to work but is marginal with customary 1-tube receiver. Should be entirely practical with 2-tubers like Control Research conversion, which gives relatively huge current changes on even weak signals.

Speaking of escapements, some builders are making heavy duty jobs from surplus 6V relays. Rugged and really positive action had with low current drain.

Ever think of working R-C on 150 kilocycles? It's very reliable, but receiver is relatively complicated and current drain high. Also, range is very limited. Main advantage—no license of any sort required!

R-C planes are getting smaller and smaller. We've seen 3-footers that fly well. One of those who really understands the midgets is West Coaster Dick Schumacher with 42" job using Rudder-vator; wt. 24 oz; flown with English Mills 1.3 cc diesel and with Cub .074. Note low dihedral—only 6 deg.; found to give much smoother action in and out of turns. Dick has built them down to 33". Who has one smaller—and still practical?

Commercial News. For those who find model airplane R-C a little too hectic (don't we all, at times?), Berkeley Models, West Hempstead, N. Y., will market 30" Chris Craft in fall. Berkeley, incidentally, now does most of their R-C test work in boats. Can't spin in, no waiting for good weather, no ships lost O.O.S. Sounds like Utopia.

Raytheon advises R-C they hope to start shipping RK61's to fill back-orders by September. They will try to build up a year's stock. All this, of course, unless vital defense orders prevent RK61 production, as they have since fall of 1950.

Apropos Half-A R-C jobs mentioned above, new tiny batteries are being made. Eveready has #912 1½ V. flash-light cell, 1¼" x ¾" dia., weighs ¼ oz. For B battery, try Olin #0815 hearing aid job of 22½ V. and weighing .7 oz. (Also made in 15 and 30 V. equivalent sizes.)

Advanced R-C operators have often had use for DPDT sensitive relay. Well, there is such a thing. Sigma Instruments, 70 Ceylon St., Boston 22, Mass., makes one of about the same size as widely used Sigma 5F, and known as Series 52. They make another, Series 22, that has same double coil construction but only half the size. Takes more power, of course, to operate these double contact jobs, but relays are still "sensitive."

The Vernon C. MacNabb Co. advises us of an error in listing their two-arm self-neutralizing ½ oz. escapement last month. The current drain is 200 to 300 m.a. on two pencils, and not 400-600 as given by us. Sorry!

Guess this does it for the month. Don't fail to send R-C your Club news, contest news, or plain chit-chat to Ye Conductor, c/o Air Trails.

—HOWARD G. McENTEE



The Power of Champions!



The best of America's young model builders...like America's best plane builders...work to exacting "specs" with only the finest materials. And for powering rubber models, that means the specially compounded propulsion tape...power-packed T-56.



UNITED STATES RUBBER COMPANY
ROCKEFELLER CENTER • NEW YORK

The Full Scale Champs Use Francisco Too!

Perhaps you didn't know that Francisco Racing Fuels have been standard in the high speed fraternities across the nation. For years, the big scale champs have relied on Francisco Racing Fuels to establish new speed records and protect heavy investments in superb racing engines.



STOCK CARS



MOTOR CYCLES



HOT RODS



MOTOR BOATS



RACE CARS

F FRANCISCO
THE FUEL OF THE
CHAMPIONS

THE MOST RESPECTED FUEL IN THE WORLD
FRANCISCO LABORATORIES

FIRST • LARGEST • BEST EQUIPPED
3787 Griffith View Drive • Los Angeles 39, Calif.

The Bright Light of
FUEL FACT Dawns Upon the Land!

FRANCISCO FUEL!

WITH FRANCISCO PROCESSED FUELS you expect to get **POWER** and **PERFORMANCE**. But in addition you get **FUEL STABILITY**; you get **TOP PROTECTION** for your engine; you get **TOP SAFETY FOR YOU**; you get **FUEL UNIFORMITY**; you get **NO RAW FUELS** — NO IMPURITIES. These are contest fuel facts—not fancy.

In 1936 Francisco Laboratories offered \$1,000.00 to anyone who could equal or improve Francisco Fuel formulas. Top chemists the country over tried, in vain. Today, two of the Francisco fuel formulas are valued in excess of \$144,000.00.

Twenty-four hour-by-hour testing and filter control. Processed methanols, nitrates; treated, de-gummed castor oil concentrates. Stay flying with Francisco Fuels.

Ask Today for Your Booklet
"CONTEST FUEL AT ITS BEST."

THE **ONLY** FUEL with **volatane control!**
THE **ONLY** FUEL processed to **avoid spoilage!**
THE **ONLY** FUEL which is **truly acclimatized!**
THE **ONLY** FUEL based on **30 years' experience!**



"SPITFIRE"

special glow fuel, below 50% rel. humidity.



"NITROL"

most powerful contest fuel.



"HI-THRUST"

just what it suggests in contest glow fuel.



"BLUE-BLAZER"

tops in sport stunt fuel—least engine wear—lowest price.



"INFANT

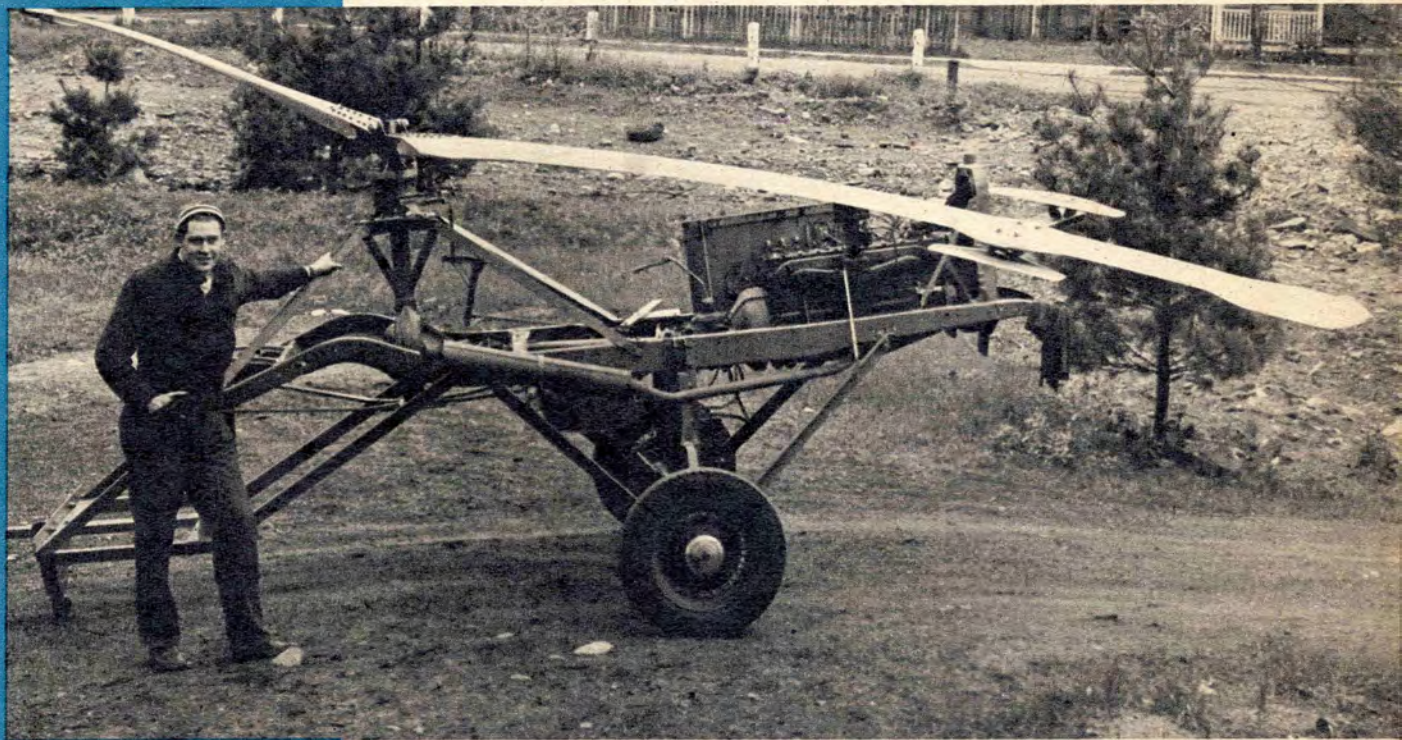
THIMBLE GLOW"

1/2 A—out of this world.



1951 . . . First production of the Kaman HTK-1 for U. S. Navy on maiden flight.

the Case of Charlie Kaman and his Curious 'Copter



1945 . . . Big (6'6") C. H. Kaman with original ground operated rotor test rig (auto frame).



1946 . . . Charles Kaman (left) chairman of the board and president of the Kaman Aircraft Corp. checks data taken on test rig with Bill Murray, now chief of flight test.

This ex-modeler turned helicopter manufacturer parlayed a \$50 junk auto into an \$18 million Connecticut aircraft concern

■ One warm summer day in 1945, 26-year-old Charlie Kaman drove into the automobile graveyard of a Hartford junk dealer, plunked down \$50 and towed away a sad-looking 1933 Pontiac. For the next few weeks the old heap was the center of much activity in the shop of an East Hartford manufacturing concern. A "face lifting" to end all face lifting was underway. When the job was finished the strange contraption was towed to Kaman's mother's home in West Hartford.

Speculation and puzzlement took over the entire neighborhood. What the neighbors saw bore little or no resemblance to an automobile. The chassis had been raised several feet above where Pontiac's engineers intended it to be. Two wheels were missing and the two remaining wheels were located where no self-respecting automobile would ever think of wearing its wheels. The rear end had been rotated 90 degrees so that one rear axle pointed up. The other rear axle was missing. A panel mounting a collection of dials and gauges stood up

CHARLIE KAMAN AND HIS CURIOUS 'COPTER

alongside the engine. There was a weird assortment of steel braces here and there, a tow bar protruded from one end, a small third wheel was stuck underneath, and the gas tank had decided to move up closer to the engine.

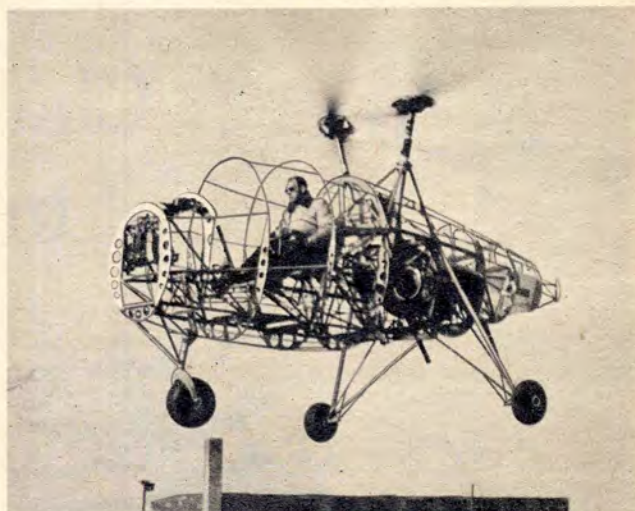
Many of Mrs. Kaman's neighbors had heard of her son's idea for a new kind of flying machine. Some of them, then and there, decided that: 1) the "thing" never would fly and, 2) Charlie Kaman's aircraft company probably wouldn't amount to very much. They were 50% right. The "thing" never would fly. It was designed and built to stay on terra firma like any other dignified automobile. It was, however, the first concrete evidence that Kaman's ideas on a new approach to solving certain helicopter design problems were being pursued with vigor. The "thing" was the ground-operated test rig on which full-scale rotors could be tested and valuable research and development data recorded.

Looking back a few more years to 1940, when members of the graduating class at Catholic University in Washington, D. C., lined up to receive their degrees, Charles H. Kaman, former record-holding model plane builder, was there to be presented a Magna Cum Laude in aeronautical engineering with the highest grades in the Engineering Department. Almost before the caps and gowns had been packed away to await the next year's graduates, Kaman turned up in the aerodynamics section of Hamilton Standard Propellers' Engineering Department. From then until the summer of 1945, when he left the East Hartford propeller concern, engineer Kaman applied his training to propeller and rotor aerodynamics. In doing so, he conceived his ideas on a way to simplify the helicopter's complex rotor control system. Those ideas evolved into the "servo-flap" rotor control which later resulted in the first fully servo-controlled helicopter to receive CAA certification and to go into production for commercial and military uses.

In the early days of Kaman Aircraft the cellar and garage of the Kaman residence were utilized for engineering and workshop. Friends and relatives became interested to the extent of helping financially through purchases of stock in the new company. Other friends, who were in the aeronautical engineering business, worked nights and weekends at Kaman's residence and took stock as pay for their services. Kaman's wife Helen, who had also done engineering work at Hamilton, left her drafting board only when it looked as though coffee and sandwiches were needed to keep the gang going.

With limited working capital, progress was slow at first. However, by mid-1946, enough engineering had been accomplished to prove that the "servo-flap" control was not only practical but that it had certain definite advantages. With this proof in hand, Kaman received financial support from New Enterprises Incorporated of Boston, and from an increasing number of individual investors. As the financial status of the company improved, the speed of the helicopter development increased. In January 1947, the experimental machine—the K-125—made its initial flight from Bradley Field, where the company had moved into larger quarters.

The first tangible evidence of the Navy Bureau of



In 1947 the original Kaman helicopter made its first flight. Unusual were the twin intermeshing rotors and "servo-flap" control system, features of all Kaman designed helicopters. Note absence of tail rotor.



The partially completed K-125 with Charlie at the controls. Ship now had its NX license, Navy became interested in design and awarded the struggling concern a small engineering development contract in 1947.

Aeronautics' interest in Kaman came in May 1947, in the form of a small engineering development contract. This was followed by another Navy engineering contract early in 1948. At the same time, possible commercial applications of rotary wing aircraft were explored and, in April 1949, the K-190 utility helicopter was certified by the CAA for commercial uses. A short time later an improved model, the K-225, received its CAA approval. The same summer Kaman helicopters were doing agricultural dusting and spraying in Connecticut, New York, Maine, North Carolina, and Florida.

Meanwhile the Navy's interest in the Kaman design continued via additional contracts. Early in 1950, two K-225's were delivered to the Navy and one K-225 went to the Coast Guard. The K-225's were purchased for evaluation testing by those services. Largely as a



Kaman K-225 spreading DDT over potato field near Syracuse, N. Y. K-225's have been sold to Navy, Coast Guard, Turkey, State of Miss.

result of the Navy's evaluation tests of the K-225, the company received its first big Navy production contract for HOK-1 helicopters in June 1950 prior to the start of the Korean war. This was followed in September by a production order for HTK-1 Navy trainer helicopters. The first HTK was rolled out and flown to Anacostia Naval Air Station, Washington, in April of this year.

In June 1950 Kaman employees totaled 23 and the company occupied one building on Bradley Field. Today, with an \$18,000,000 backlog of Navy orders, the company occupies eighteen buildings on Bradley, plus 8000 square feet of engineering offices in Hartford and has 540 employees. Expansion of facilities is continuing and it is anticipated that the start of production of HOK's will see a substantial increase in personnel. KAC can be proud of its accomplishments.



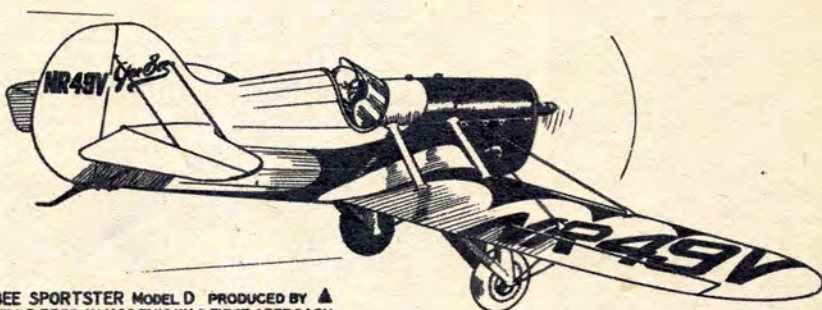
Bill Murray, chief of flight test, at controls of K-125 in 1948. Ship had twin rudders added by then. Kaman concern now has Navy contract to investigate application of Boeing 502-2 gas turbine in a 'copter.

AIR PROGRESS

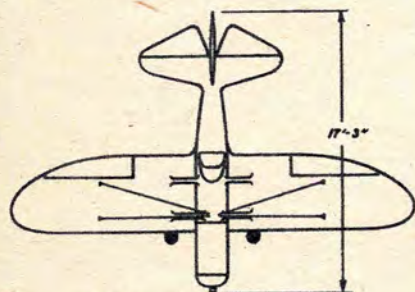
By DOUGLAS ROLFE

THE GEE BEE STORY

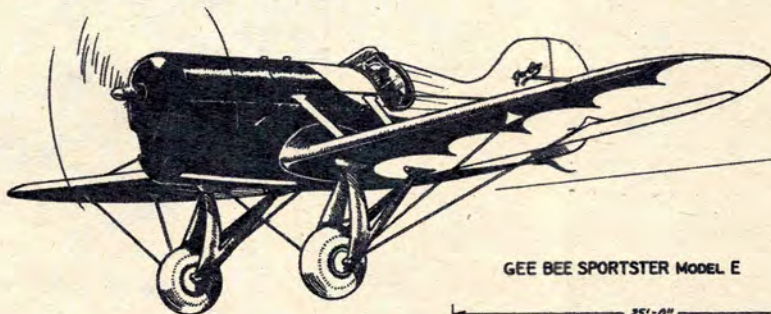
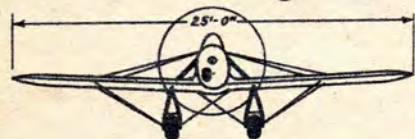
Most fabulous racers of all time ... the record-breaking, trophy-winning "flying milkbottles"



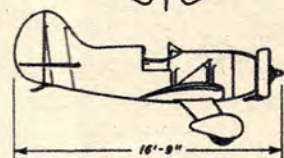
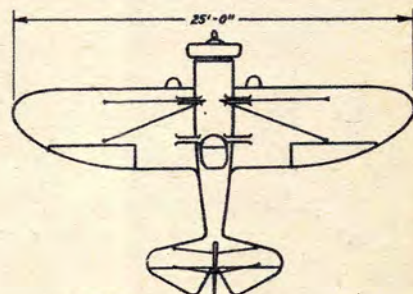
GEE BEE SPORTSTER MODEL D PRODUCED BY ▲ GRANVILLE BROS. IN 1930 THIS WAS FIRST APPROACH TO THE FAMED GEE BEE RACERS. THE SEMI-CANTILEVER ◀ WINGS WERE EXTERNALLY BRACED AS SHOWN WITH STREAMLINE STEEL WIRE. VARIOUSLY POWERED WITH 85 AND 125 H.P. MENASCO OR 110 H.P. CIRRUS ENGINES IT HAD A TOP SPEED OF 150 M.P.H. WITH 125 H.P. ENGINE ▼



GEE BEE SPORTSTER D



GEE BEE SPORTSTER MODEL E



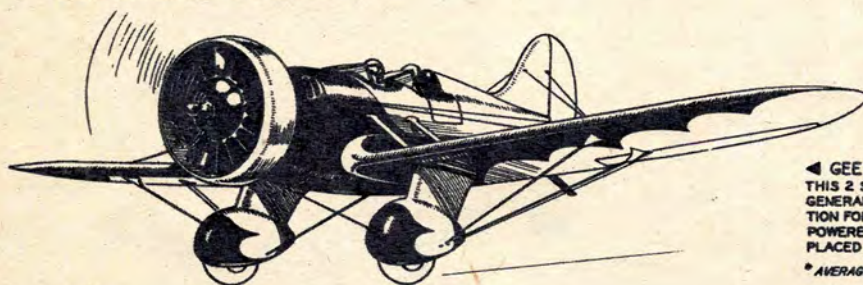
NOTE MODIFIED RUDDER & FIN

NOTE MODIFIED COCKPIT AND DOORS

TOWNEND DRAG RING

GEE BEE SPORTSTER MODEL E WAS A ▲ MODIFICATION OF THE ORIGINAL MODEL D DESIGN. REFINEMENTS NOTICEABLE ARE FAIRED IN LANDING LEGS, IMPROVED RUDDER OUTLINE AND CLOSED-IN COCKPIT. WITH 110 H.P. WARNER SCARAB RADIAL ENGINE TOP SPEED WAS 148 M.P.H.

DOUGLAS ROLFE



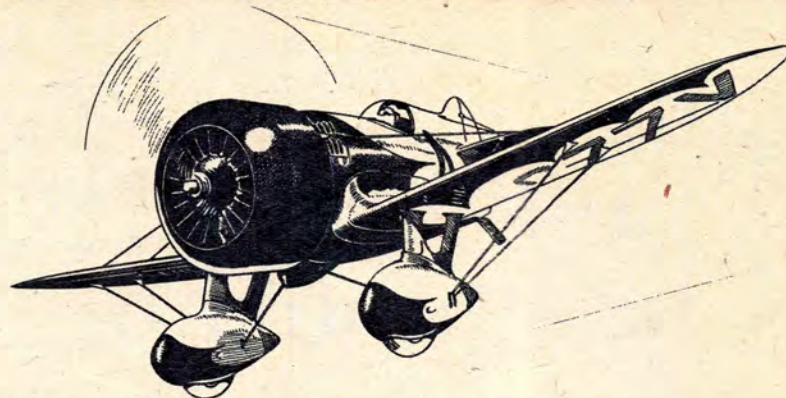
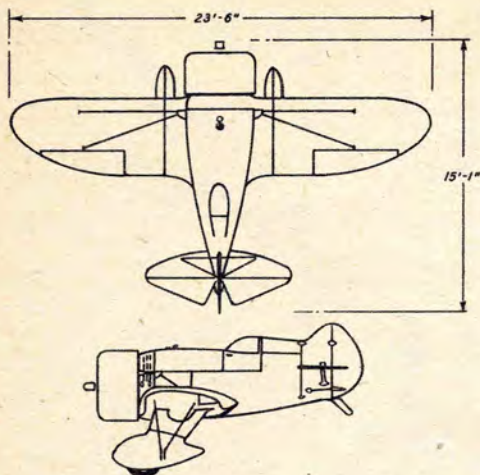
◀ GEE BEE SENIOR SPORTSTER MODEL YL. THIS 2 SEAT MODIFICATION OF THE MODEL E IS GENERALLY REGARDED TODAY AS THE INSPIRATION FOR THE MODEL Z RACER. A SINGLE SEAT Y, POWERED WITH A 300 H.P. P&W WASP "C" ENGINE PLACED 4TH IN 1931 THOMPSON TROPHY RACES*

* AVERAGE SPEED 201.250 M.P.H.

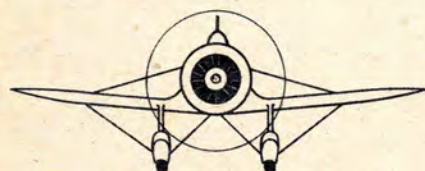
In the early 1930's the most exciting racing airplanes in the world were the stubby, speedy little Gee Bee Racers which flashed briefly across the aviation scene and then passed into obscurity. During their short reign they managed to win the coveted Thompson Trophy for two successive

years and hung up an unofficial world's speed record for land-planes. The general history of these externally braced, low-wing monoplanes is traced by the illustrations above.

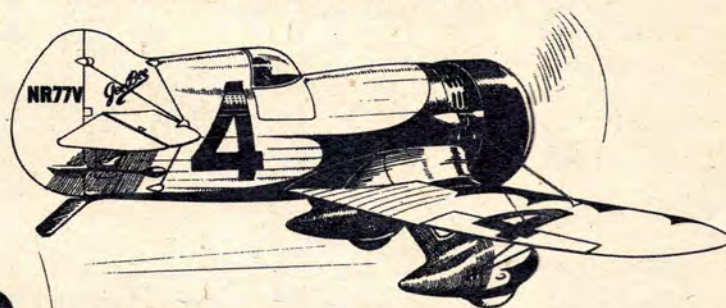
The name "Gee Bee" was derived from the name of the original company, Granville Brothers, which set up business in



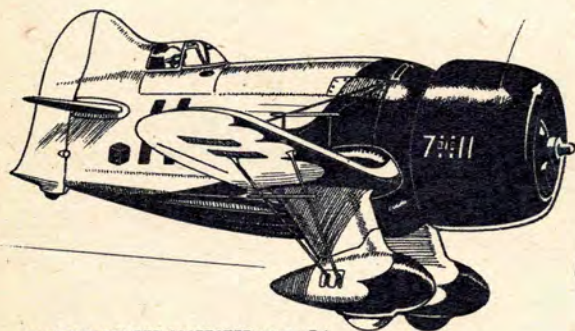
▲ GEE BEE SUPER-SPORTSTER MODEL Z, FIRST OF THE FAMED GEE BEE HIGH SPEED MONOPLANES AND WINNER OF THE 1931 THOMPSON TROPHY RACES*—IN NOVEMBER 1931 THE SAME MACHINE EXCEEDED THE EXISTING WORLD'S SPEED RECORD FOR LANDPLANES. IN A FURTHER ATTEMPT TO ESTABLISH A NEW AND OFFICIAL† RECORD IT CRASHED, KILLING THE WELL-KNOWN PILOT LOWELL BAYLES. ENGINE WAS A 535 H.P. P & W WASP JUNIOR ▼



GEE BEE SUPER-SPORTSTER Z

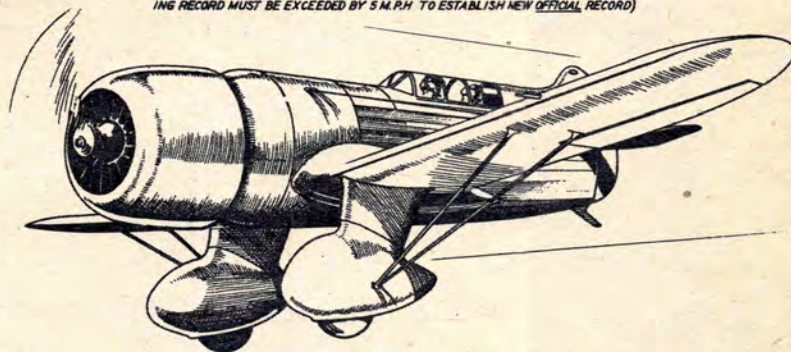


* AVERAGE SPEED: 236 M.P.H.—PILOT: LOWELL BAYLES
† EXISTING RECORD: 278.3 M.P.H. BAYLES'S SPEED: 281.5 M.P.H. (BUT STANDING RECORD MUST BE EXCEEDED BY 5 M.P.H. TO ESTABLISH NEW OFFICIAL RECORD)

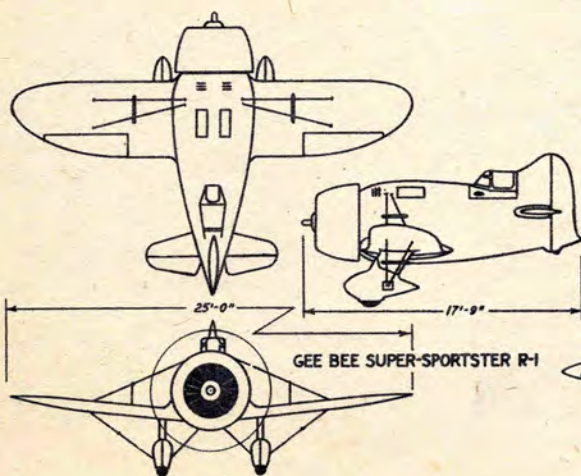


▲ GEE BEE SUPER SPORTSTER MODEL R-1 WINNER OF THE 1932 THOMPSON TROPHY RACES IT WAS POWERED WITH AN 800 H. P. P & W HORNET RADIAL ENGINE* A SISTER SHIP WAS FITTED WITH THE 535 H.P. WASP ▼

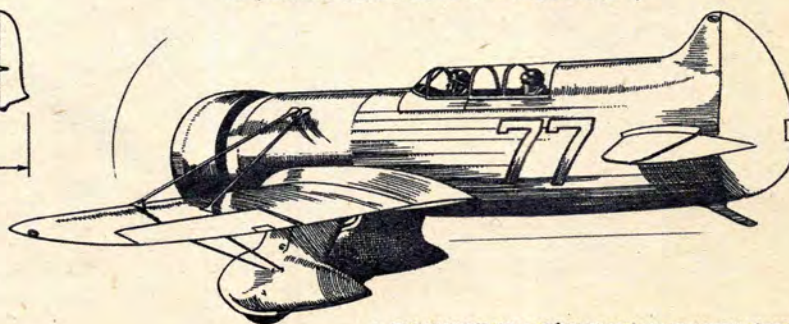
* AVERAGE SPEED: 252 M.P.H. PILOT: JAS. DOOLITTLE



▲ LARGEST AND LAST GEE BEE RACER THE R-6 (OR "Q.E.D.") WAS BUILT FOR JACQUELINE COCHRAN TO COMPETE IN THE MACROBERTSON RACE* IT WAS ALSO FLOWN IN THE 1934 BENDIX TROPHY RACES.—WINGSPAN WAS 33 FT. 3 IN., ENGINE A 700 H.P. PRATT & WHITNEY HORNET S5-E ▼



GEE BEE SUPER-SPORTSTER R-1



* THE MACROBERTSON RACE (LONDON, ENGLAND, TO AUSTRALIA) TOOK PLACE IN 1934—WAS WON BY THE SENSATIONAL DE HAVILLAND COMET

Springfield, Mass., in 1930. In 1933 the firm became the Granville Airplane Company and about 1934 this was changed to Granville, Miller and DeLackner. The latter company produced the model "Q.E.D.", expressly designed for Jacqueline Cochran (now Mrs. Floyd Odlum) for the MacRobertson

race in 1934. (The race from England to Australia.)

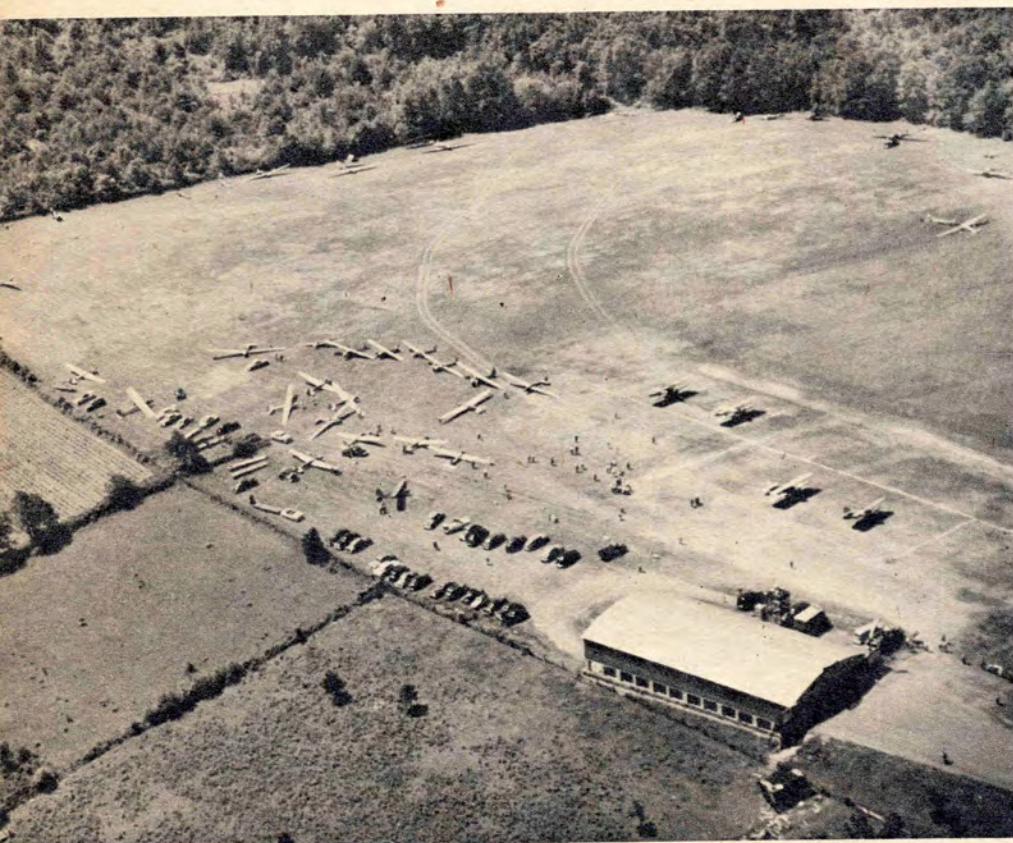
Although the Gee Bees first attracted attention in the 1931 Thompson Trophy Races, they had in fact proved to be more than ordinarily fast airplanes from the very start. The three-view drawings shown here are substantially correct.

National Soaring Championships

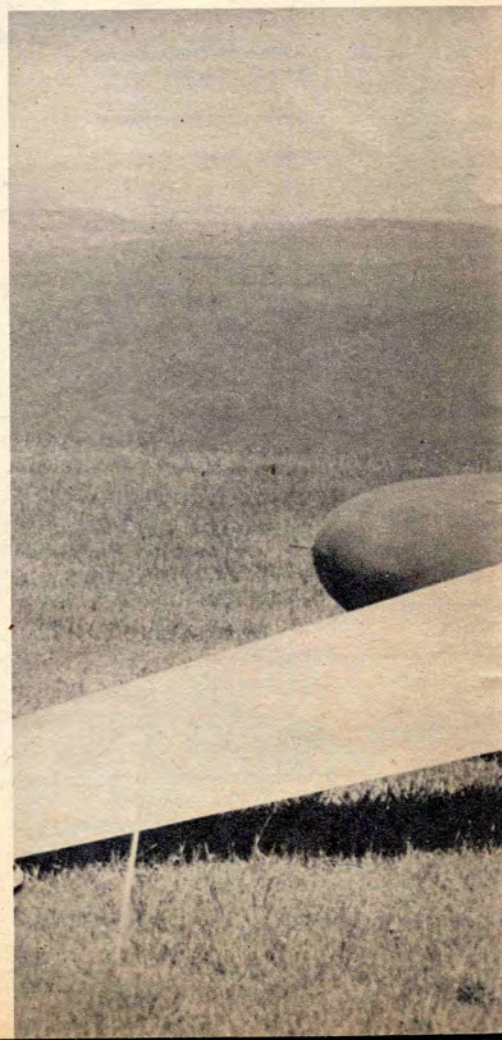
Longest flight in the history of the American movement highlighted this year's National Soaring Meet at Elmira



Above: Number ten, Dick Johnson's record-breaking sailplane the RJ-5, has an all-metal wing, aspect ratio 24, laminar flow airfoil, mahogany plywood fuselage. Glide ratio angle is 36 to 1.



Above: The historic site where American soaring was born, Harris Hill, Elmira, N. Y., played host this year to 43 sailplanes and 50 soaring pilots participating in 18th National Soaring Contest. Large hangar in right foreground can house upward of 20 sailplanes, with storage for as many more on trailers in basement. Right: Kempes Trager's interesting sailplane has all-metal fuselage, "V" type tail and Laister-Kauffman wings.

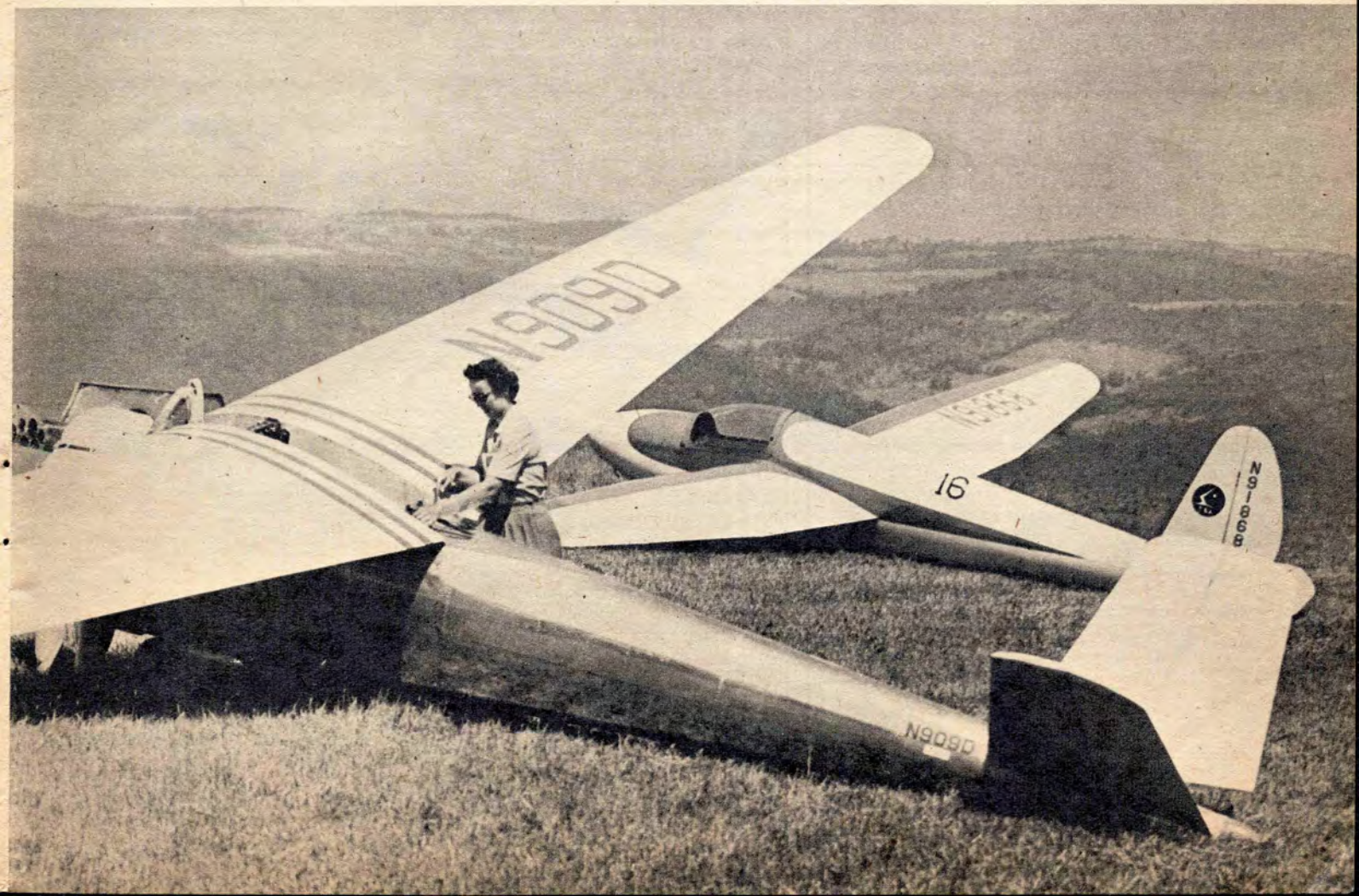




■ The cream of the country's soaring pilots gathered once more this year at Elmira for the 18th Nationals and between July 4th and 12th soared a total distance of 2,710 miles. For the second consecutive year, Richard H. Johnson of Palm Springs, Calif., copped the championship title when on July 6th he soared from Harris Hill to Norfolk, Va., covering the 365 miles in eight hours. This bettered the previous U. S. distance record, held by John Robinson of Calif, by 40 miles. Second-place holder was Stanley Smith of Tonawanda, N. Y., third was William Coverdale of Chattanooga, Tenn., whose best flight was 213 miles. Women's title went to Betsy Woodward of Riderwood, Md.



Record team: Richard H. Johnson, U. S. National Soaring Champion and crew chief Miss Joan Brouillette. Johnson is one of the finest soaring pilots in the country; also established two-place distance record several years ago. The RJ-5, shown on upper left page, was built by him.



Man-Monitored
MISSILE





■ At a Black Sea station, say reports, the Russians continue the Nazi anti-aircraft scheme of a monitored man-ridden guided missile.

The German missile design was a cruciform wing and tailed supersonic affair monitored to the target by a pilot in a flying wedge aircraft carrying a radar-guide beam. While attached to the missile the control system of the wedge is electrically responsive to that of the missile, so that during the first part of the flight the monitor plane pilot flies both the missile and monitor aircraft.

The whole unit is launched at a very high angle—between 75 and 80 degrees. Until the pilot recovers from the jar of being launched, the unit is directed toward the target by ground radar. Then the human pilot takes over as the plane-and-missile reaches the general vicinity of an approaching enemy bomber formation.

The pilot-plane detaches from the missile, then directs the big machine into the bomber formation with its radar beam. Later, for a skid landing, the pilot plane drops major part of lower rudder.

American MODEL CHAMPIONSHIPS

■ With the thermometer hovering around 100, the 20th National Championship Model Airplane Contest got underway at the Dallas, Texas, Naval Air Station highlighted by the large number of Air Force, Navy, Marine and Army personnel entered. Sponsored by The National Exchange Club, the annual "Nationals" were presented by the Exchange Clubs of Dallas in cooperation with the U.S. Navy.

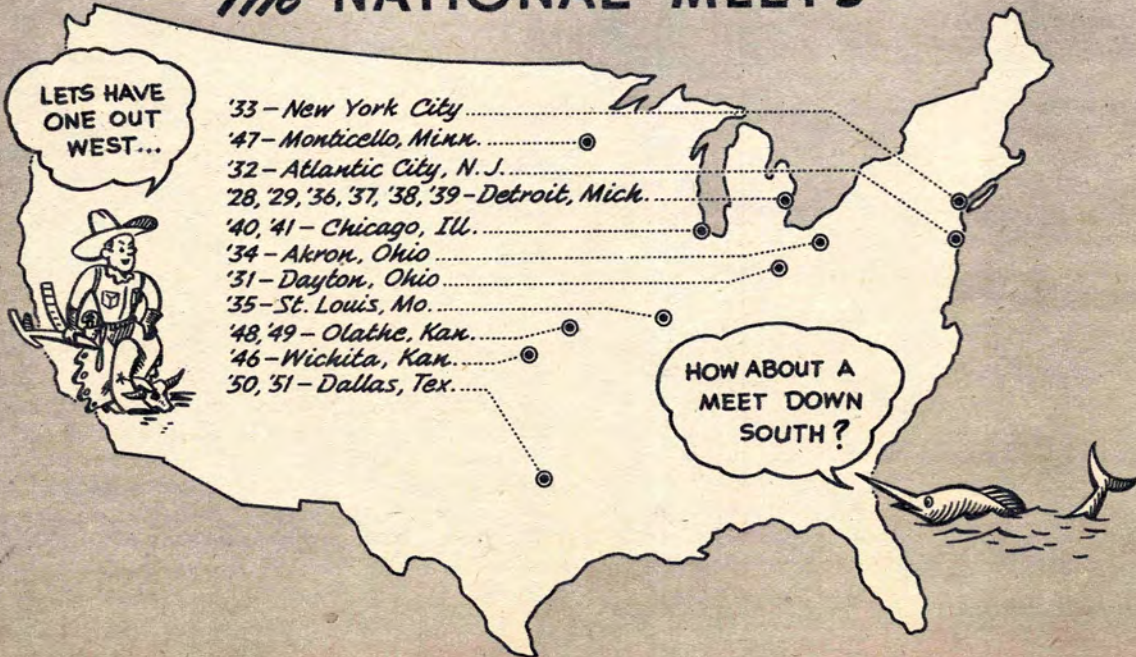


DALLAS NAVAL AIR STATION

Between six and seven hundred entrants flew in the six-day meet; the initial day's activity was curtailed considerably by high winds resulting from near-by line squalls. But this did not deter entrants who planed in from all parts of the world to compete. Canadian and Mexican flyers "came on their own" while 32 Air Force modelers representing officially that branch of the military service were flown in from 12 different AF Commands, some as far away as Japan, Tripoli and Germany.

Contest Director Maurice Teter, assisted by Dallas Exchangites, set up one of the best organized Nats. Many A.M.A. leaders helped in running off events. Following last year's example, a complete hangar was set aside for night-long building

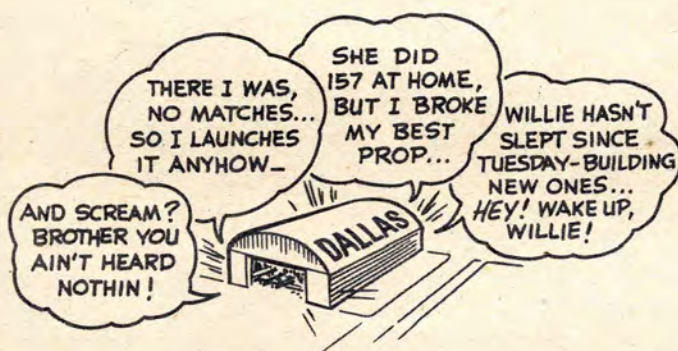
The NATIONAL MEETS



activity and popular bull sessions.

As typical Texas summertime flying weather set in, the contest got going with some excellent flight times. In towline glider top time was made by Dick Everett, San Diego, with a 7½", 860 sq. in., 49 oz. job that did 13:42.0 in the open class. Senior flyer Robert Aiduk, Kansas City, Kans., racked up 12:27.2; junior James Watson, Ft. Des Moines, Iowa, totaled 12:03.2. Top free flight Class B time was made by Ernie Shailor, Detroit, Mich., with Forster .29 original (to appear in AT) which turned in 21:41.4. Gene Jackman, Oklahoma City, was top junior flyer with Torpedo .29 entry and 15:29.7; senior James Carpenter, Lubbock, Texas, did 18:50 with a Torp .29.

Class A speed saw some fancy flying with senior Robert Kautzman of New York City turning in 116.27 with a McCoy 19 job. The team of Pat Massey and Carl "Babe" Hall did 114.35 with their McCoy 19 powered Golden Rod (plans to appear in AT); junior Tommy Davis, Atlanta, Ga., was tops in his division by a speed of 110.56, using a McCoy 19. In the Class B speed event prop-producer Tony Grish, St. John, Ind., flew his McCoy powered White Fawn to a tremendous speed of 136.98. Junior Alfred Davis, Birmingham, Ala., with an original-Dooling did 127.29, and his brother Herbert took senior honors with a similar ship by a speed of 125.78. Using a Wakefield wing and tail utilizing a Gottingen 602 section, Dick Everett delivered best time in Half-A free flight—22:05; he used a Torp .045. Don Tune, Los Angeles, topped the juniors with 13:29 flying a Torp .045 Zeek. Jack McComb, Columbia, Mo., was the best senior flyer using a Wasp powered entry which turned in 15:07.6

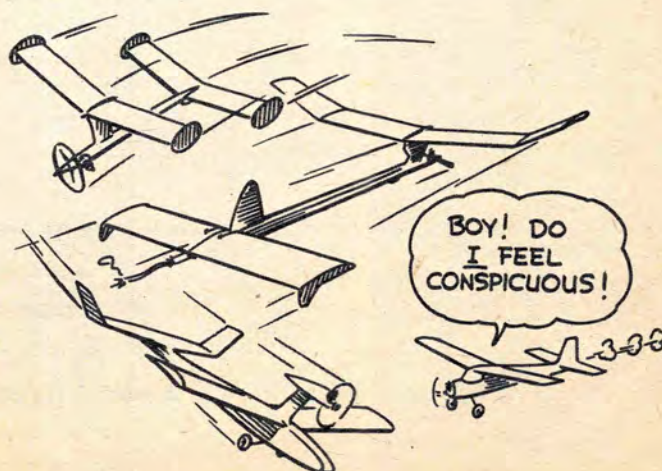
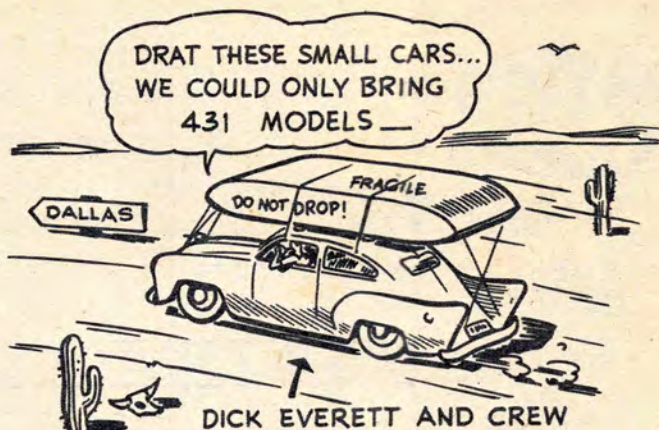


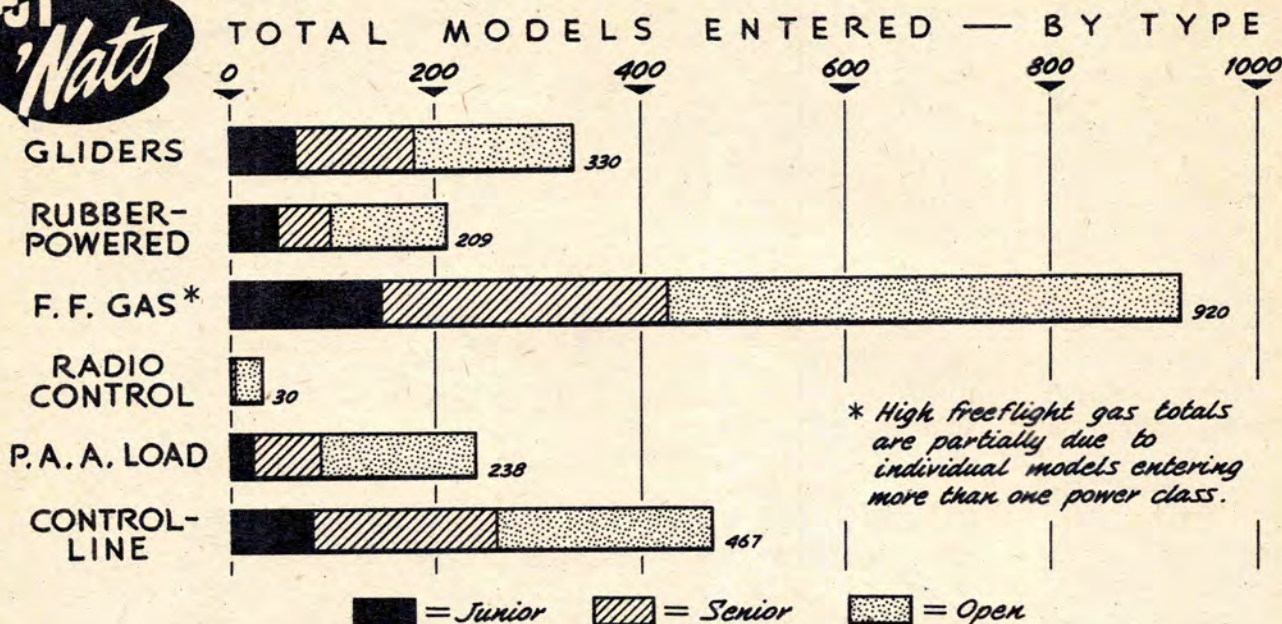
total time. Most free flighters followed conventional low-weight, high-pylon formula.

In the outdoor hand launched glider competition best time of the day was totaled by Bob Brawner of Phoenix, Ariz., whose 68 sq. in. entry did 16:44.6. A.M.A. Contest Board chairman Ray Matthews, Oklahoma City, flew an indoor glider with straight dihedral to a 15:26.1 time. Junior Gene Jackman, also of Oklahoma City, was first in his division with 6:44.7. The indoor events were held in the Fort Worth Will Rogers Memorial Auditorium under ideal conditions. Despite a relatively low ceiling, Don Tune, the Half-A free flight junior champ, racked up 41.9 seconds with a straight dihedral, constant chord, slightly swept wing hand-launched glider. A Chicago senior contestant, Charles D. Rushing, did 55.5 seconds while Joe Bilgri, San Jose, Calif., open flyer, did 55.2 seconds. Joe's glider, which has turned in well over a minute under slightly higher ceilings, will appear in AT.

In the team racing contest which saw some hot competition despite relatively few entries, Bob Lutker of Ft. Worth with a K&B .29 entry took first place. Bob had tough luck in radio control; the first man off in the contest, he cracked up on a succeeding flight.

In the indoor stick event George de la Mater of St. Johns, Mo., turned in high time of the day—21:47.5 as an open class



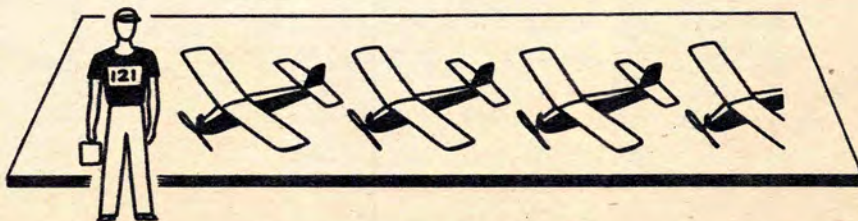


flyer. Junior Earl Hoggard, Tulsa, was tops with 10:51.4; Paul Simon, Detroit, was high senior flyer with 15:36.9. Open classman de la Mater repeated his top time performance in the indoor cabin category by doing 19:43.3. George has promised to send along the plans of his winning stick and cabin models so all AT readers can see what a real high-time indoor model looks like. Senior flyer Otto Heithecker, Chicago, turned in 9:41 and junior Steve Benovich, Detroit, did 3:51.6 in the same event.

About the most interesting and amusing competition was for rise-off-water free flight models. Relatively good conditions prevailed, better than last year by far, and some fine flights were made. Dan Lutz of Los Angeles flying an Arden .19 powered Zeek took 1st in the open class with 18:44.4. Edward R. Mates of Chicago, a very consistent R.O.W. contender, won senior honors with a Cub .09 powered original which will appear in a subsequent AT. Bill Lofland, Abilene, Texas, was ahead of the juniors with a Veco .29 powered plane which did 4:11.8. All these performances outdoors, incidentally, are the total of three flights.

Guilow Barnstormers swept two of the three first places in the precision aerobatic (stunt) competition. Lew Andrews of Norwood, Mass., the designer of the Barnstormer, garnered 382 points; his flying buddy, Donald E. Ferguson, Jr., of Newtonville, Mass., also using a Barnstormer, made top scoring total of the day and won senior honors with 389½ points. Junior flyer Harris Grimes of Atlanta, Ga., was first with 324 points. Both Andrews and Ferguson used Fox .35's, while Grimes was flying with a Veco .29.

The Wakefield rubber-powered contest provided some hot competition, literally and figuratively as the thermometer hovered around 100 and the rubber motors snapped left and right! When the final flights were in, top man turned out to be open class flyer Joe Bilgri with 13:18.8. Senior Otto Heithecker did 6:40.4 total time and junior Don Tune was high junior man with 7:17.6. At the same time Class C speed was run off with some good times, considering that the extremely hot conditions gave most flyers fuel troubles. Jimmy L. Price of Little Rock, Ark., was high junior with 121.29 mph. Jack Friedland, Oakland, Calif., was tops in the senior class with 137.51 mph. Open class flyer Lee A. Hill of Corpus Christi, Texas, racked up 136.88. Old-timer Sal Taibi, now of Long Beach, Calif., was crowned king of Class A free flight; flying in the open

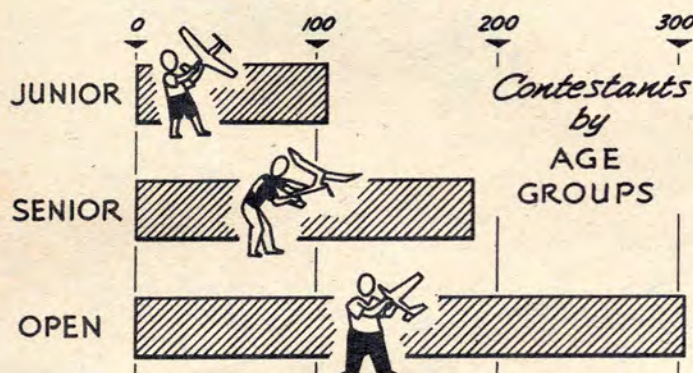


AVERAGE CONTESTANT ENTERED 3.7 MODELS !

class he knocked off 27:44.1 to win. Bob Gelvin of Topeka, Kans., was best senior contender with 22:21.6. Richard Moore of Oklahoma City topped all juniors with 16:49.4. Gelvin and Moore used Arden .199's; Taibi used an Arden .099.

AT's old friend Frank Ehling of Jersey City, N. J. walked off with Half-A PAA-Load honors by flying a Torp .049 original job (to appear in a future issue) powered by a Torp .049. Frank's time as an open flyer was 15:31.4. Senior James P. Kohls of Detroit flew a Wasp model to 9:03. Junior Gene Jackman, Oklahoma City, did 9:06.8 with a Torp .049 plane. In the big size Class D speed event junior Harry J. Fiegel, Texas City, Texas, was fastest man of the day with 148.88 mph using a McCoy .60 in a 32 oz. model. Senior Herbert L. Davis used a Dooling .61 to get 148.76. Pat Massey and Carl Hall flew their big Golden Rod which was powered by a McCoy .60 to 146.69.

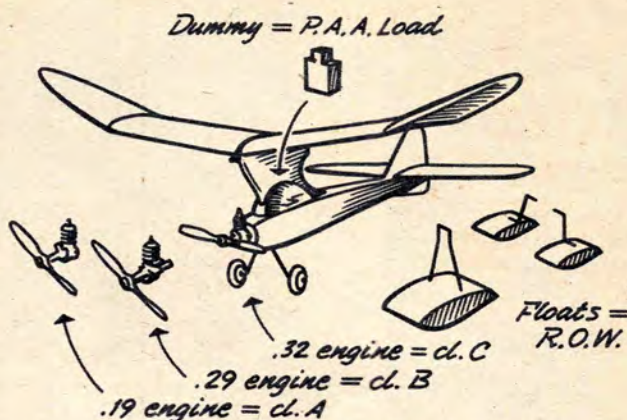
A disappointingly small number of entries were made in rubber-powered flying scale. Open class flyer Robert Bienenstein of Detroit flying a Berkeley Interstate Cadet left the competition stunned when his model flew for more than 9 minutes. He ended up with 236 points. Senior James Casper, Quincy, Ill., with a DH Puss Moth amassed 161 points. There were no junior flyers who qualified.



Brawner's had 140 sq. in. and weighed 5.6 oz. Junior Ronald Nowicki, Detroit, using a 150 sq. in. model that weighed 6 oz., was high in his age group with 7:29.1.

In the radio control event final tabulations showed Jim Walker in a commanding lead with 271 points. Clifford Schaible, Roselle Park, N. J. won the Navy radio control bomb dropping event with 99½ points. Bob Lutker, Ft. Worth, flying an S.E.-5, took top honors in the Navy's carrier event with 225.45 points. PAA-Load A-B event was captured in the open class by the original PAA-Load winner, Herb Kothe, now of Grand Prairie, Tex. His Torp .29 ship flew for 15:19. In the senior class Michael Cook, Glendale, Ohio, was first with 3:36.6; he used an O&R .29. Top control line flying scale points (50) went to CPO John K. Abbott, USN, Corpus Christi, with a Corsair. Juel Clevenger took first in senior with an "AT" AT-6; he's from Kansas City, Mo.,; he scored 37.75 points. Jimmie McCroskey, Iredell, Tex. was first in junior with a P-51 and 22 pts.

In jet speed open class flyer Tommy Baker stationed in Tripoli took first with 140.73. Herbert L. Davis, Birmingham, Ala., was top senior with 142.63 mph; top junior was Tommy Davis, Atlanta, Ga., with 132.35. All winners used Dyna-Jet engines. In the PAA-Load (Continued on page 82)



A SINGLE F.F. GASSIE CAN
ENTER 5 DIFFERENT EVENTS!

In the Class C free flight competition some mighty excellent totals were turned in. Open classman Robert L. Ottoman did 28:05.4 with a K&B .32 powered original. Senior Don Murray, West Point, Ga., used a Triumph .49 to get 22 minutes. Junior Curtis Franke, San Antonio, Texas, flew his Torp .32 powered entry to 18.43. In unlimited rubber flying Henry A. Cole, Jr., Mt. View, Calif., was highest with 15:00.9 in the open class. Senior Bob Brawner did 8:50.4. Cole's model had 220 sq. in. of wing area and weighed 8.8 oz.



■ The bird-like *Taube* (meaning Dove) was outstanding in the early development of aviation. First built in pre-World War I days, the characteristic wing and tail shapes gave it close resemblance to its namesake. As a military craft, built by many German aircraft manufacturers early in the war, it was seen in a number of variations.

Our semi-scale model follows the *Rumpler Taube* version which was powered by a 100 hp Mercedes engine (the six cylinders being mounted in pairs) and achieved a 70 mph speed.

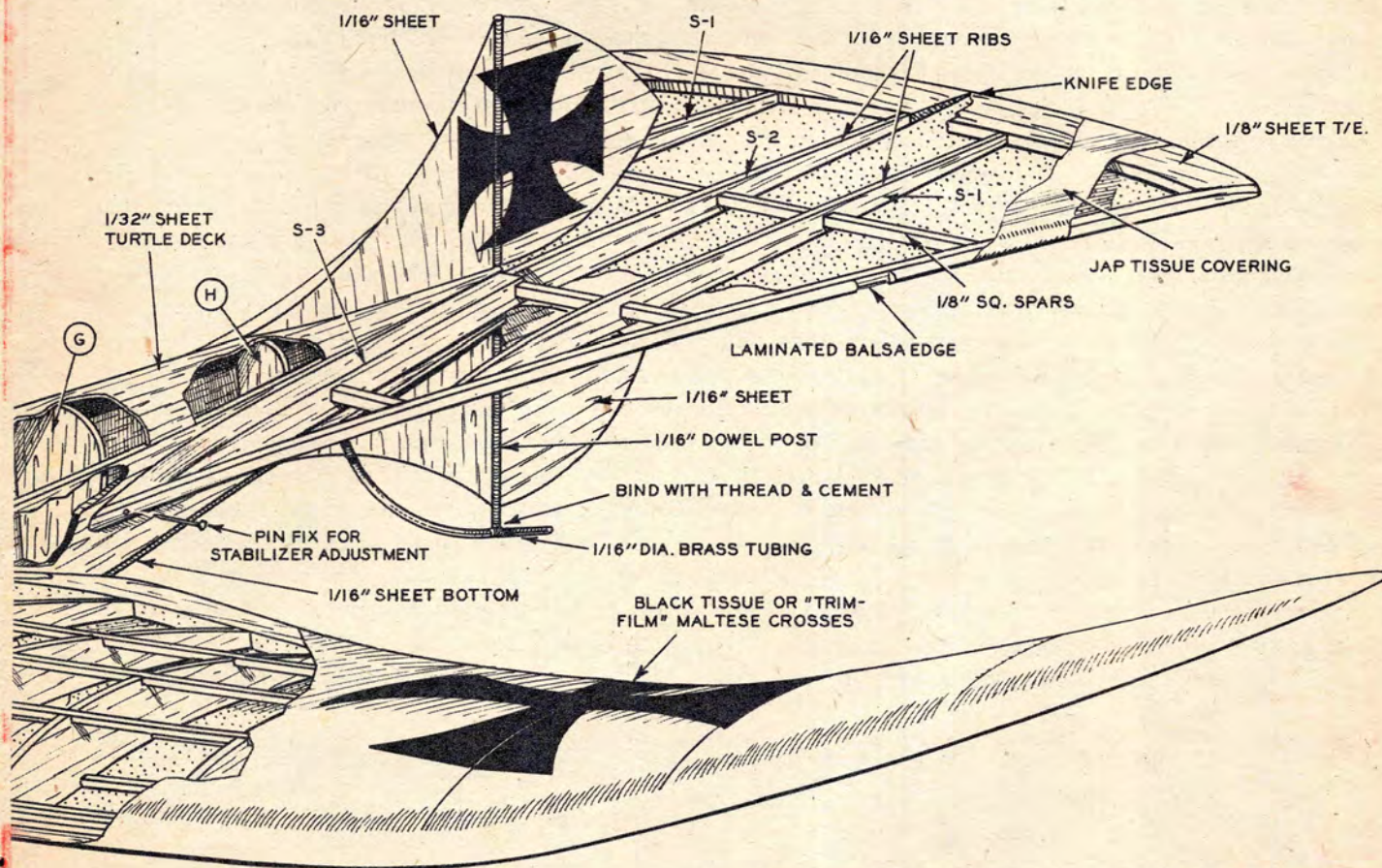
For realism in flight, the important scale features have been retained, but to make extended, stable flying possible, some distortions and liberties have been taken.

panels and a removable stabilizer make this possible.

As to flyability, the model has exceeded our original hopes; its climb is comparable to most Half-A ships, the glide being very smooth and graceful. Ready to fly, the model weighs six ounces and—since it soars readily—the builder would do well to install some type of dethermalizer.

Other engines of Half-A size are adaptable, in fact the *Taube* will fly realistically on the tiny .02 Infant Torpedo. Plans show installation of the .045 Baby Spitfire engine, though very little difficulty will be had in modifying the nose for installation of Cub, McCoy or Wasp engines.

Try to select light, straight-grained balsa for



The complex external wing bracing wires are omitted, and the swept wing tips employ slight polyhedral rather than the sharply washed-out rigging of the prototype.

One feature, unique in any type of scale job, is that the *Taube* may be easily knocked-down for convenient carrying. British style plug-in wing

fuselage sides—cutting them both from the same sheet if possible. This makes fuselage alignment easier.

Mark former locations on the sides and, beginning at the widest part of the fuselage, pin and cement the sheet formers in place.

Later add the bottom sheet and landing gear members. Build the wing "plug-in" box carefully, adding the center sheet bulkhead which assures

RUMPLER "TAUBE"

the correct wing alignment. Engine mounting bolts are cemented firmly behind the firewall before installing it.

Dummy radiators add a bit of scale realism. However, the left one may be omitted if it interferes with timer or fuel shut-off installations. A timer cut-off can be installed in the front cockpit. Turtledeck sheeting is fitted and applied—the edge between the 1/16 inch sides and the 1/32 inch decking being sanded away.

Since some Half-A engines do not prime readily due to weak crankcase vacuum, the original model employed a gravity tank made to replace the rear dummy cylinders. Other tank installations are suitable. The simple aluminum exhaust shield or baffle is recommended to reduce the fire hazard and to keep the nose section clear of excess oil.

Thrust line can be raised if necessary in altering former "A" for installation of other engines, and the height of the dummy cylinders can be changed to match that of the engine's cylinder.

As modified from true scale, the wings are simple and efficient for model use. The curved, laminated leading edge is the only unusual aspect, and is another construction feature used widely in England. The strips are thoroughly water-soaked and, beginning with the inner one which is bent against a row of pins (working over the wing plan), the succeeding strips are pinned and liberally cemented to the proper outline. When dry the curvature is retained. Continue wing assembly with trailing edges, tip parts and ribs. Since the spar strips curve and pass the ribs at an angle, it is best to cut the notches in the outer ribs, as the spars (also water-soaked) are fitted.

Raise wing frame from the work board to add lower spars, then cut edges and spars as necessary to add polyhedral. Block to position and permit

wing to dry thoroughly. The plug-in tongue should be mounted parallel to the work board when the wing is blocked to correct dihedral. Cement it firmly and later check to see that it makes a firm friction fit in the fuselage box. Round off leading edges, taper trailing edges and tips and sand.

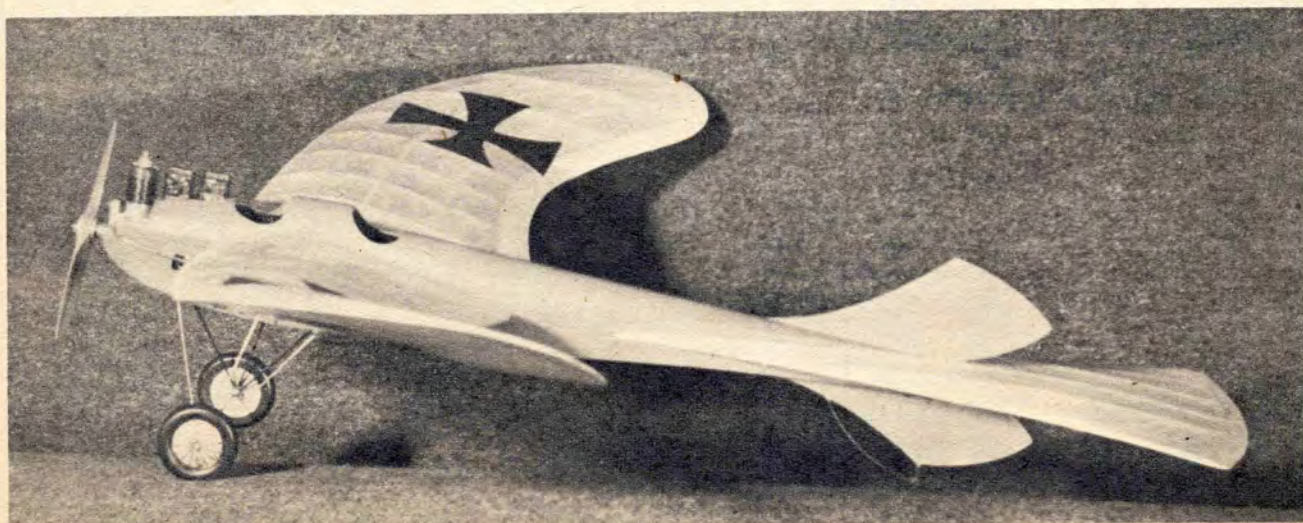
Laminated edges are used in the stabilizer, formed in same manner as the wing leading edges. Build the spars and ribs as one unit, the curved edges and trailing edge as another, then join the two after they have dried. Add the heavy inner ribs and sand the structure preparatory to covering.

Build the rudder of medium sheet, noting grain directions, and the small dowel stiffener. Tail skid is attached by binding and cementing as shown.

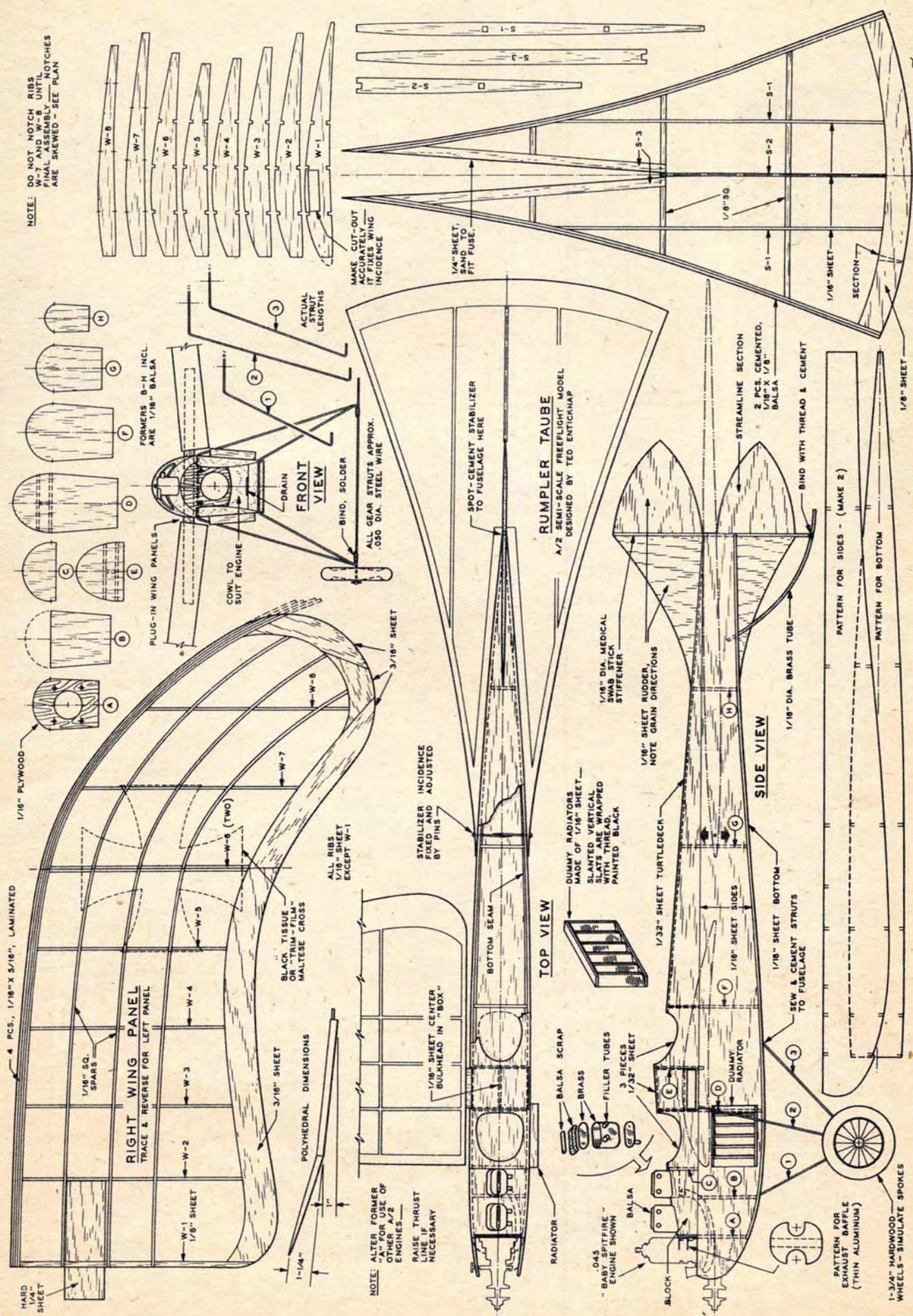
For once, dispense with the sponge donut wheels and dig up a pair of old-style hardwood wheels for realism. The gear struts are bent to shape, sewed and cemented to the fuselage, bound and soldered to axle. Simulate spokes by painting if desired.

Jap tissue is the covering material. We use and recommend Butyrate dope, which is used as ordinary clear dope but which is fuel proof and fire resistant. It is available in colors. Clear dope can be tinted or colored with dye, colors-in-oil, etc. Our *Taube* wings were left white with black Maltese crosses, the fuselage being painted a bright color. If you use Silkspan, add a plasticizer in the dope to avoid brittleness.

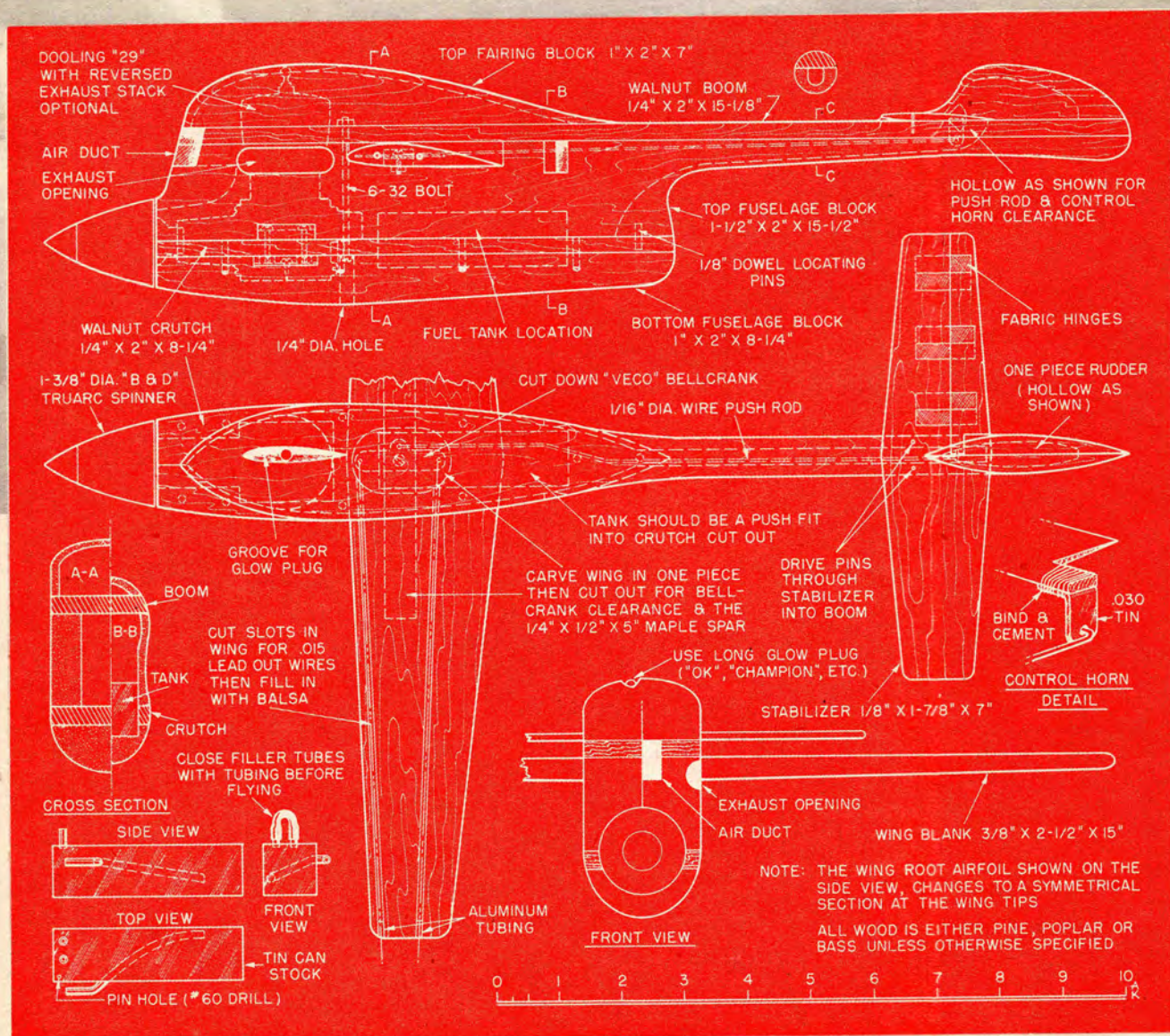
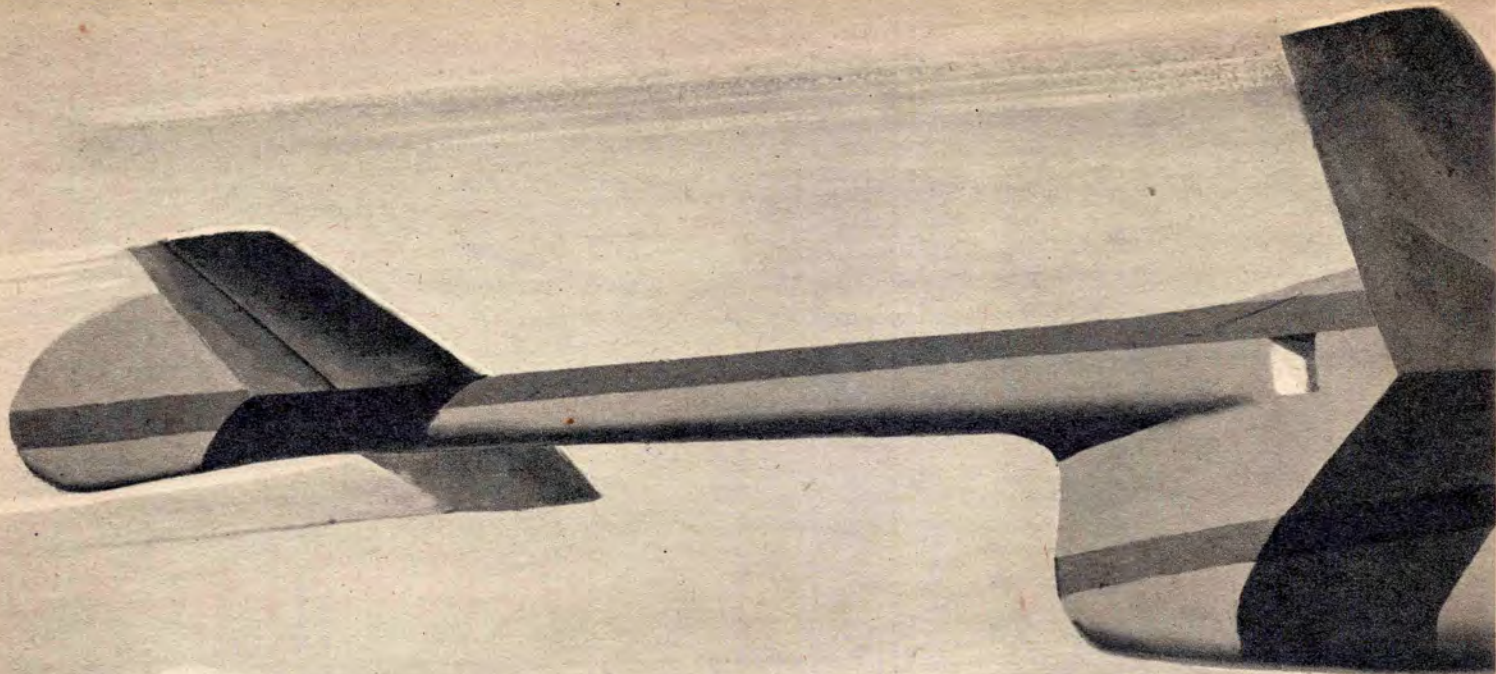
Balance the model near the back of the plug-in tongue. Add clay in nose or tail to achieve this C. G. location. Make hand glides to determine trim, adjusting stabilizer incidence as necessary. First power flights should be of short duration with rich setting. The *Taube* can be flown to right or left, although the original model climbed to the left in tight spirals and glided to left in large circles. Slight downthrust will likely be needed.

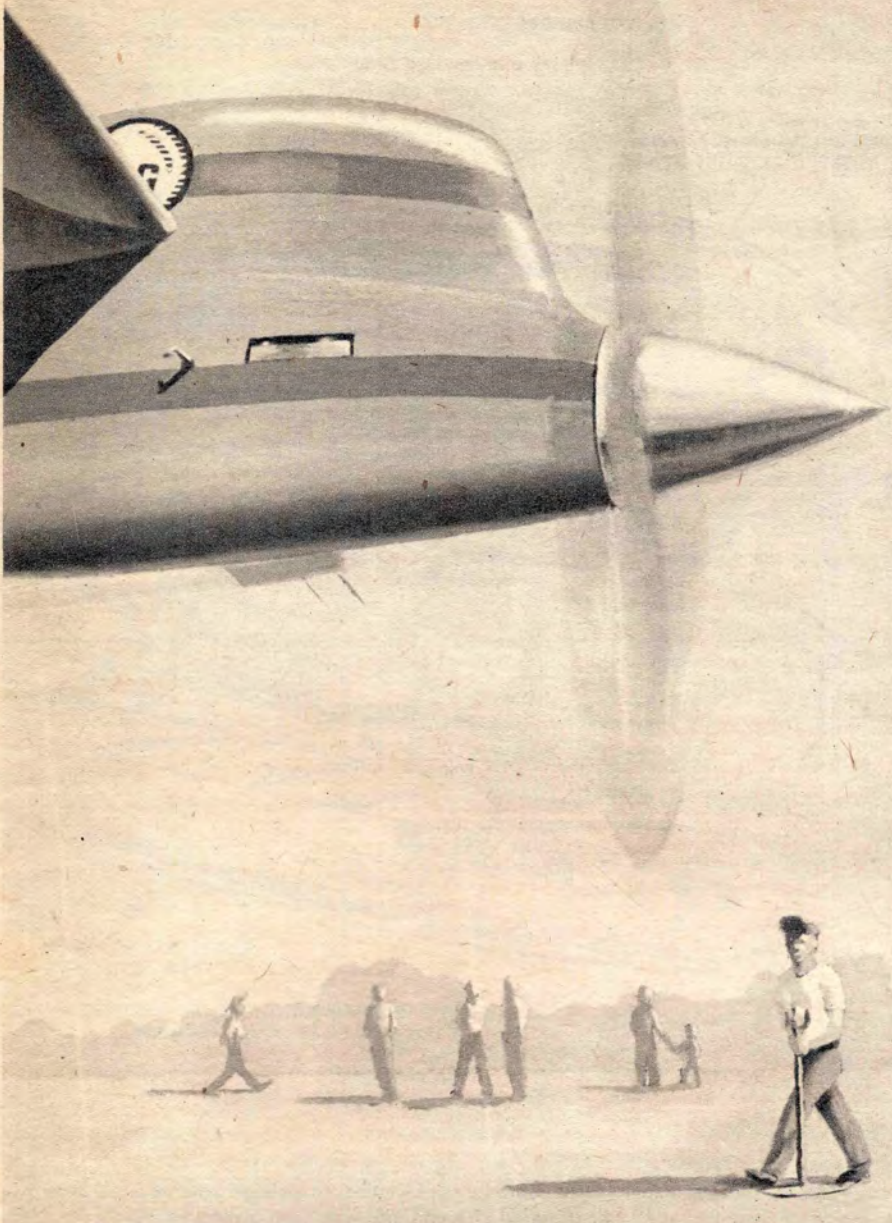


This model is a real flyer and has been in use for over a year. Ted has had some fine thermal flights; see unretouched photo on pg. 32.



Thomas





the **FLING**

Contest winning speed model made of wood reverses the trend to metal, lowers costs, and is easier to build

By FLETCHER SLADE & ART HASSELBACH

■ Capturing first place at a speed contest is the beginning of a new career for any modeler. After your first victory it is a constant battle to better your speeds, if only to prove that your previous victory was not the exception. Speed flying was a very vague step for the average modeler until a few years ago when special speed propellers, fuels and stock racing engines appeared on the market for the model consumer. Soon these "commercial" combinations were taking many first places at our big contests.

The opportunity afforded the beginner to purchase this merchandise put him right up with the top boys. Now, with present Class D speeds close to 160 mph we thought we would like to try a differently designed ship in the hope of setting a new speed record—the ultimate dream of all speed flyers. The first model we experimented with was a Class D ship and after the test flight we agreed this design had many possibilities.

In order to keep cost at a minimum we decided to

build a Class B ship. After several mock-up models were carved and completed, we selected the model illustrated in this article as our first choice for a fast and easy to fly speed job.

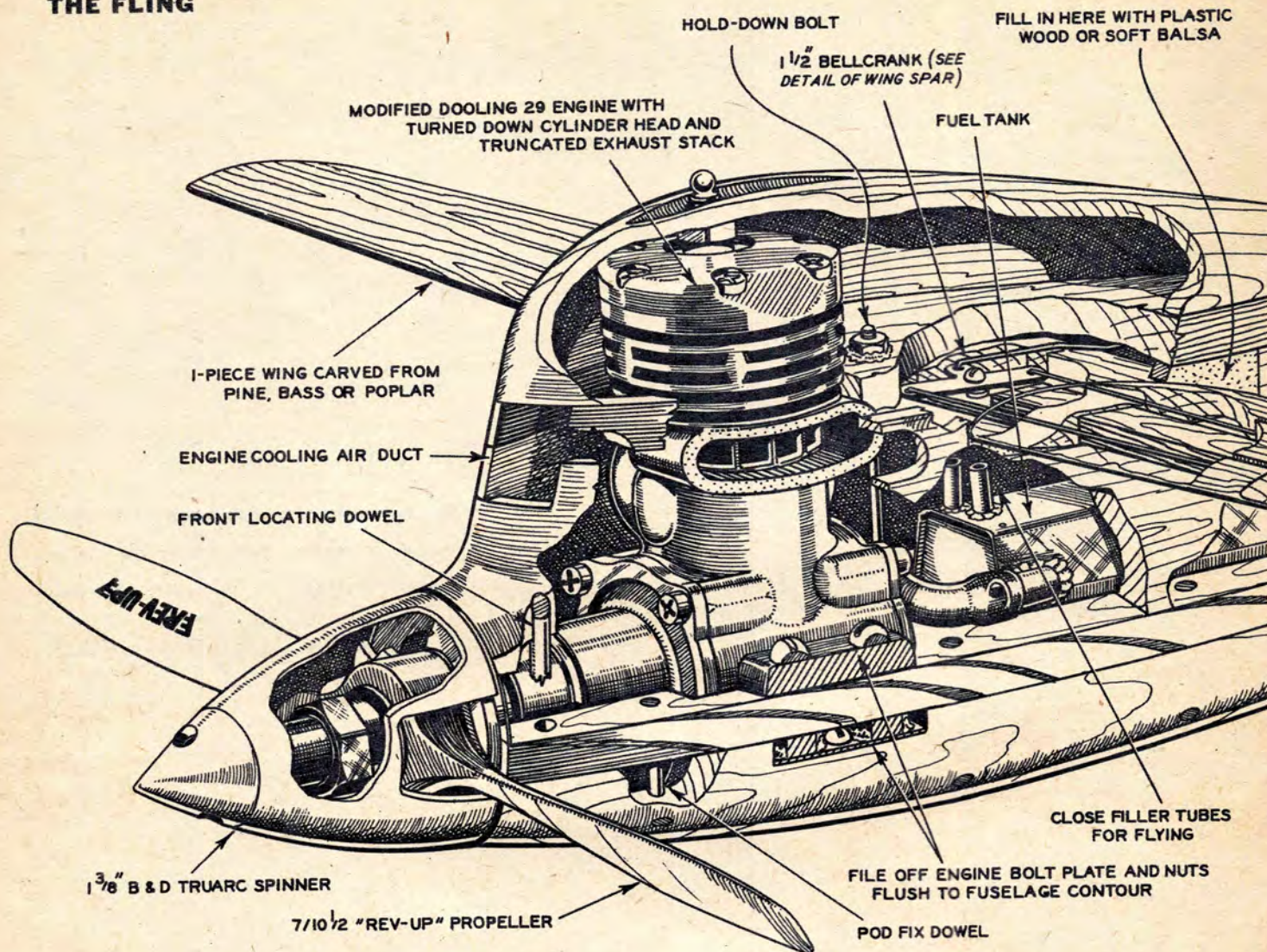
The original was powered with a Dooling .29 using a 7/10½ propeller and stock Hell Razor fuel. All the early test flights were very encouraging, despite the fact that these were made during the winter season. During the summer an impressive number of first places have been racked up in Eastern contests by *The Fling*.

This model is constructed of poplar; two walnut crutches are used, one for the engine mounts and the other for the boom extension. A conventional type speed tank, rectangular in shape with a pinhole vent, proved most satisfactory.

One very important factor to be noted is that the wings and empennage are high. This will prevent model damage when you fly on rough circles.

Exploded view of fuselage assembly shows com-

THE FLING



ponent parts. Upper assembly which carries wing and stabilizer is formed in three sections glued together. The lower pod assembly made from two pieces is held to the main assembly by a single bolt passed through the pod and bearing against the underside of the hardwood pod crutch and secured to the nut affixed to the boom section. Bread-and-butter construction makes for easy carving of the component parts. Note: the engine bolt fix plates must be put in position before completing the pod section, and both nuts and base plate filed off later to conform to fuselage contour.

Construction procedure is as follows: cut the walnut crutch to outline shape as shown on plan (including the engine mount set-up). Fasten the crutch to the bottom fuselage block (cement and dowel as indicated). When the cement is set, carve to the shape shown.

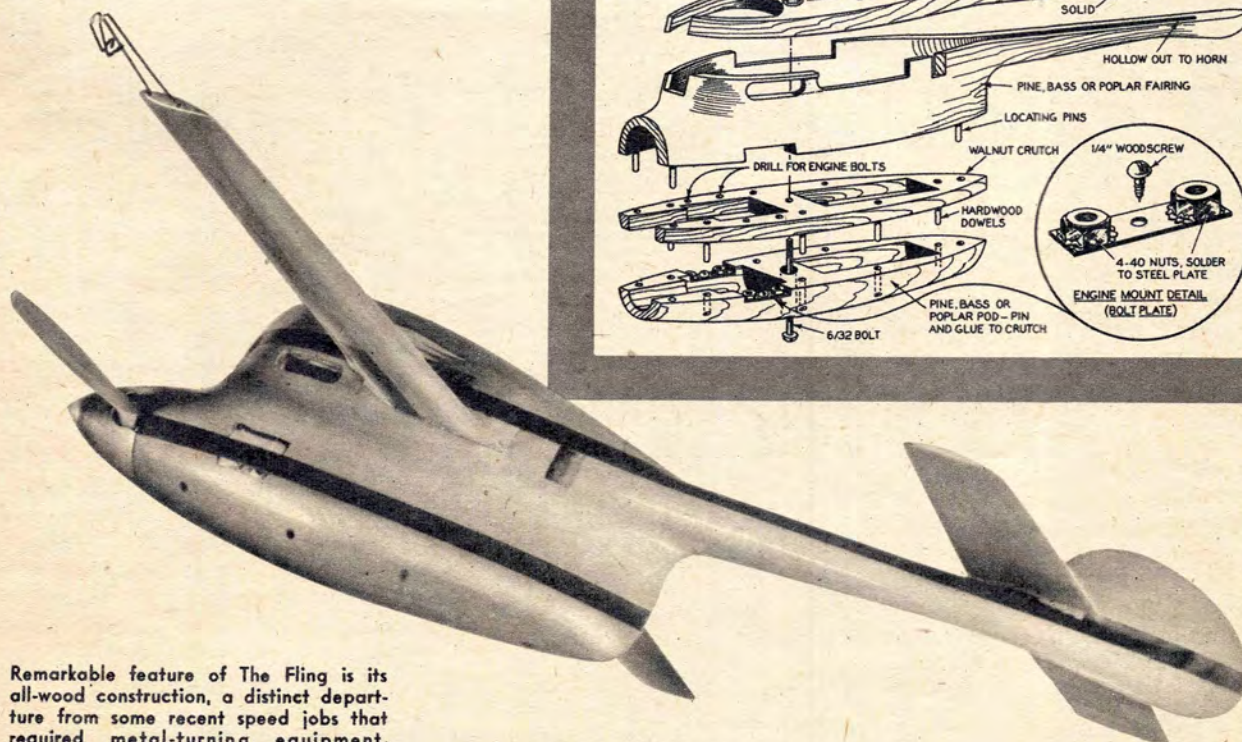
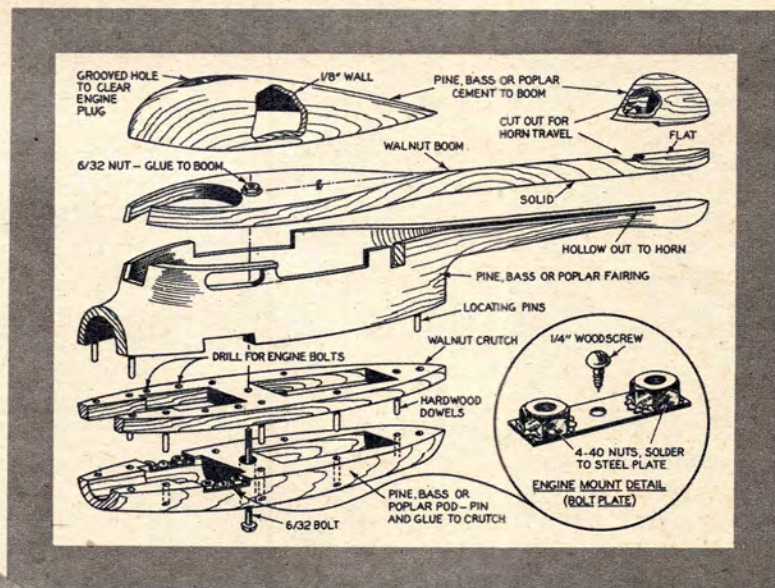
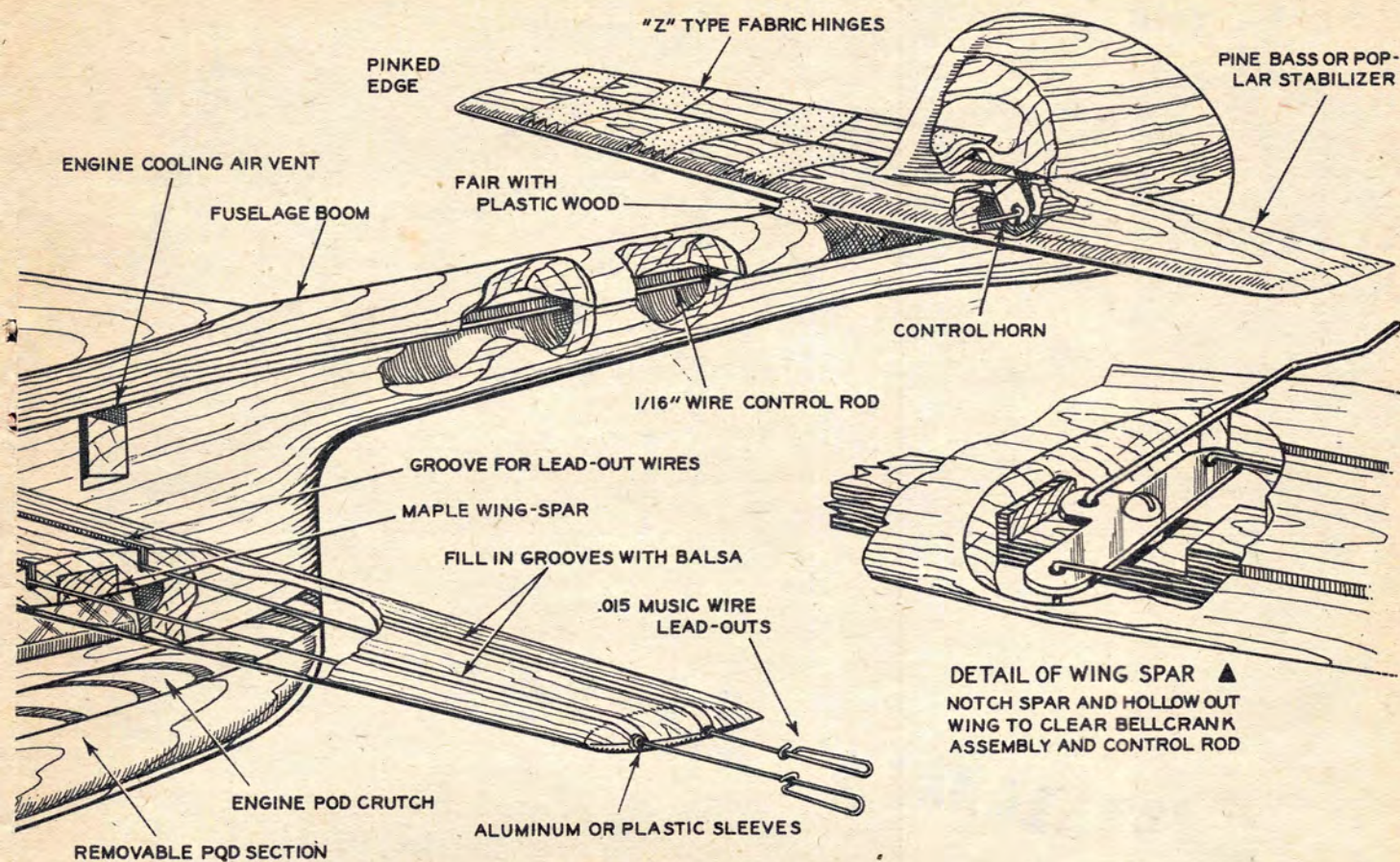
Cut the walnut boom as shown on the top view. Spot-glue top fairing block on top of the boom and then glue the fuselage top to the bottom of the walnut boom. When the cement is thoroughly set, carve to shape, then sand to a smooth finish. Carve the wing to conform with template shown on the plan. Insert the wing spar, then mount the bellcrank. Cut grooves for lead-out wires.

Take the fuselage top apart by breaking the spot-glued joint, then hollow the entire fuselage top and fairing to a thin wall. Leave the walnut boom solid. Cut out the top fuselage to insert the wing as indicated. Build elevator and stab as shown on plan, using Flightex hinges. Then cement in place. Drive two pins through elevator and boom. Install pushrod from elevator horn to bellcrank, connect lead-out wire, then cement entire top section together. Add rudder fairing as shown.

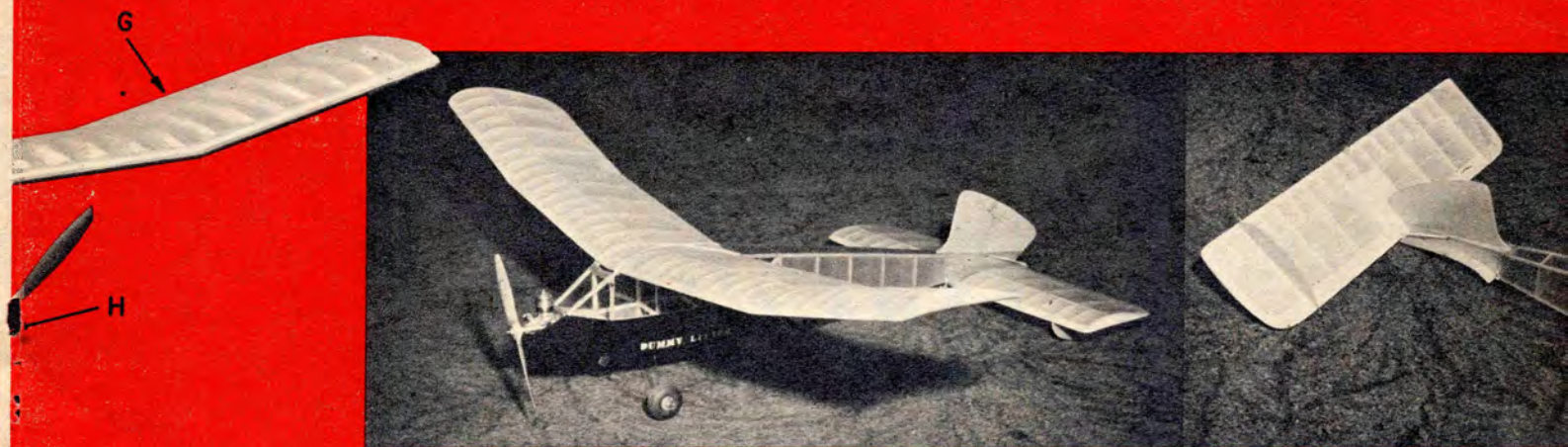
Finish-sand entire model. Then apply three coats of sanding sealer. Rub with fine 6/0 sandpaper, then wax. Install engine and tank. A regular tank with a pinhole is used. In flying you will find this model a very easy one to hand-launch, if it is released at zero incidence.

Bill of Materials

Bottom fuselage block—bass, pine or poplar, 1" x 2" x 8 1/4"; walnut crutch (motor mount)—1/4" x 2" x 8 1/4"; fuselage top (not to be confused with the top fairing block)—pine, bass or poplar, 1 1/2" x 2" x 15 1/2"; walnut boom, 1/4" x 2" x 15 1/2"; top fairing block—bass, poplar or pine, 1" x 2" x 7"; rudder—bass, poplar or pine, 5/8" x 1" x 3"; wing—bass, poplar or pine, 3/8" x 2 1/2" x 15"; maple or walnut wing spar, 1/4" x 1/2" x 5"; stab and elevator—pine, poplar or bass, 1/8" x 1 7/8" x 7"; twelve inches of 1/8" dowel for pins; one 6/32" bolt 3" long; four 4-40 x 1/2" R.H. bolts; one 6" x 6" x .006" sheet tin for tank; 6" of 1/8" O.D. tubing for gas line; one 1 3/8" spinner.



Remarkable feature of The Fling is its all-wood construction, a distinct departure from some recent speed jobs that required metal-turning equipment.



Plane features a pop-around dethermalizer to prevent the fin from being displaced each time the dethermalizer operates; one sub-rudder is pivoted on 1/16" dowel to handle turn adjustments. Wire clips hold the setting.

■ In designing a model for the Half-A Payload Event, it should be kept in mind that the take-off distance must be short. This means the model should produce a good amount of lift at low speed. Due to the high power output of Half-A engines, it was found that a model of Wakefield proportions would best suit the requirements. Flight test durations were over two minutes fully loaded—unloaded this model makes a fine free-flight competitor. The large cabin can be put to good use in carrying the necessary large loads for the new Clipper Cargo event, also.

Rather than employ the ultra-fabrication which many call simple, it was decided to be old-fashioned and have simple longeron, box construction. By using hard 1/8" balsa throughout the fuselage, adequate strength is supplied. Use of sheet fill-in at nose and tail adds much strength at the key points of impact.

Since the entire model is built around the occupant, this item should be made before fuselage sides are joined into a box. Choose pine wood for an occupant as it minimizes the amount of lead required to bring it up to weight. Weight is added by drilling a series of 1/4" holes in bottom of the occupant and filling them with melted solder.

Use rubber-bands, or pins, to fasten temporarily the fuselage sides to dummy. Cross-braces and formers are added to complete the body structure. You will find that by doing this you will have a jig which holds fuselage square and assures a snug fit for dummy. Liberal cement gussets at this stage will eliminate a lot of future trouble.

The landing gear wire is mounted between a balsa sandwich consisting of two sheets of hard 1/8" and 1/16" sheet filler. If the wire you use is slightly smaller, you should sand filler sheet down to match wire thickness.

Medium-hard, straight-grained sheet balsa is selected to form tail platform. Use two or three pieces of sheet to get proper width. The dethermalizer hinge is cemented to upper rear of this platform. Make this hinge from a piece of tubing and a length of paper clip wire which is soft and easy to align. Strengthen the hinge mounting by covering it with cloth or silk.

While fuselage sections are drying it is wise to save time by marking and cutting all parts needed to build the flying surfaces. Ribs can be marked, using a ball

point pen and balsa template. This method leaves dark, clean lines which are easy to follow during cutting process. After trimming, ribs should be sanded to their completed shape by stacking them into one pile and using a straight sanding block.

Forget about dihedral and build the wing frame flat. All spars are added in final stage. Only variation in the construction of stabilizer is use of a 1/4" rib as indicated on plans. This serves as the sub-rudder mount. When wing structure is dry it is cut apart at the dihedral points. Mount center section of one wing flat on a board and add the tip, following the indicated dihedral. When this is properly aligned, other wing panel is placed so that it is leading edge to leading edge with the first. Pin and glue this panel so that it aligns with the first. In this manner both wings are set at exactly the same dihedral. Both panels will be joined to complete the assembly, and then the spars will be added.

What happened to the half-ribs? These are added after the spars are dried into place. In making them fit do not exert pressure on spars as this will put irregular tension into wing and produce warps at a later stage. Tip blocks of soft 1/4" sheet are glued onto outer ribs. These blocks need not be pre-shaped as they can be easily carved after mounting. The necessary balsa gussets and cloth reinforcements are now added.

There is little to say about the rudder construction. Cut rudder and sub-rudders out of 1/8" sheet and sand them into airfoil shape. One of the sub-rudders has a short length of 1/16" dowel built into it. This dowel acts as the pivot for the variable sub-rudder adjustment.

For a firewall it has been found best to use at least 3/32" plywood. Cut and mount this onto the front of fuselage. A little sanding will bring it to proper size after glue has set. By using two pieces of 1/16" sheet and a soft balsa block you can build up a neat, simple cowl for your engine. Tack-cement this unit to firewall and then shape it with a sanding block.

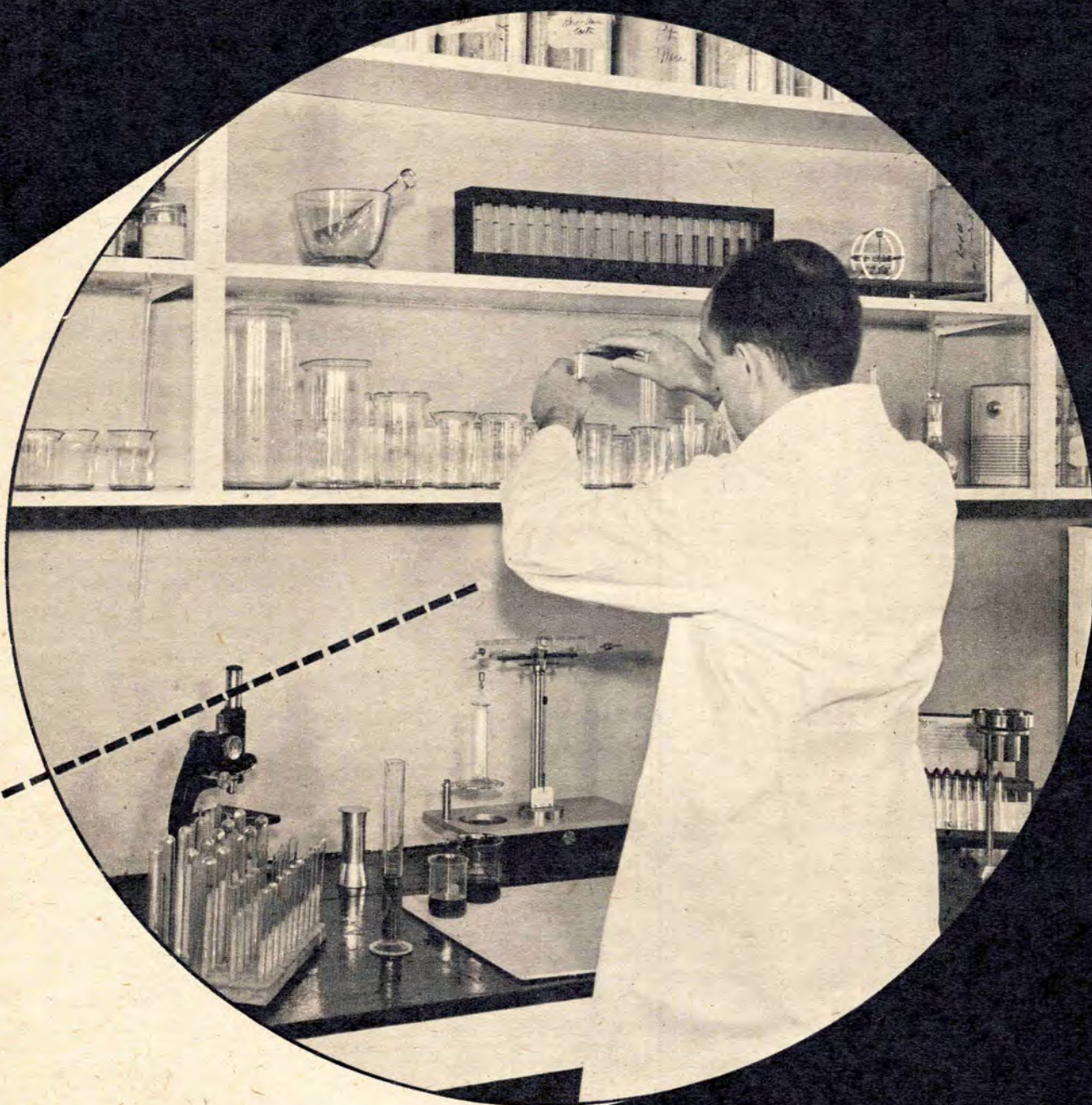
Covering will increase the glide of any model, so get out your tissue or Silkspan and dope. Cover entire model, windows on fuselage and all. These sections are cut out after the first coat of dope has been applied. Use at least five or six coats of plasticized dope on entire model and sand (Continued on page 52)

IT'S WHAT'S IN BACK OF THE LABEL
THAT *Counts...*



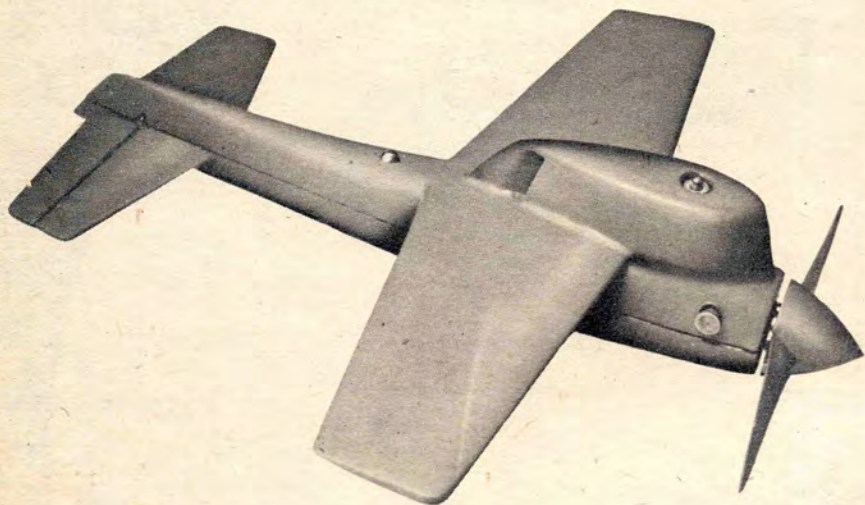
TESTOR CHEMICAL COMPANY
ROCKFORD, ILLINOIS

BEL



TESTORS ...THE DOPE

**THAT IS SPECIALLY FORMULATED
FOR MODEL AIRPLANES...**



WEE WHIZZ WAGONS

One of the most popular categories in AT's design contest has been this one for Half-A speed jobs won by a U. S. Air Force sergeant.

■ "How many miles per hour?" is the question now heard 'round the world. So the speed boys have lots of company all over this planet, all interested in squeezing a few more miles out of an hour.

Sometimes an outsider may wonder what keeps the speed boys

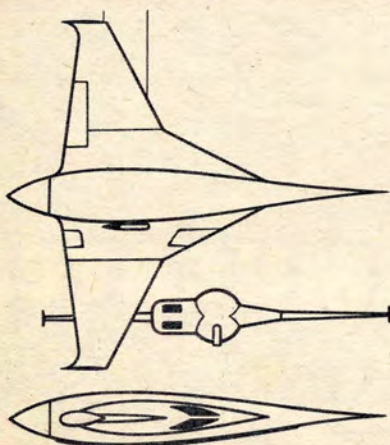
trying, year after year. When all is said and done, it is like any other competitive effort: trying to beat the other fellow if possible, in this instance his personal time. To accomplish this means research of some sort. Once a man starts on research, it is very hard to stop

him short. Ask any modeler!

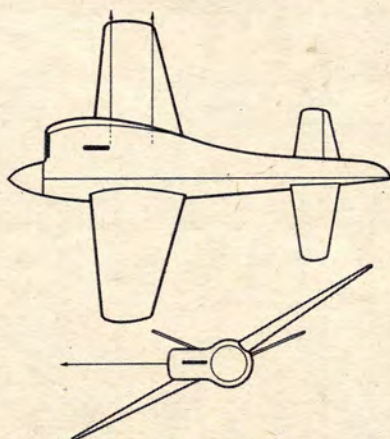
We hear talk about the speeds now being so high and the models so specialized that they are very difficult to duplicate and that newcomers do not have a chance. Yet, the very fact that records are high gives the newcomers something special to work toward. The feeling is good when you eventually get up there. Besides, even if the modeler never does reach the top, the effort will pay off in an all-around appreciation of speed and what it takes to add few more "miles per hour" to one's models.

We had quite a job in deciding on this month's winner, the model entered by USAF Sgt. James W. McConnell of Miami, Fla. As you can see, there are several entries which would be fun in trying. However, with an unusual design we would be taking a greater than 50-50 chance on the outcome. It might mean we would have to go through with a complete development of that design; so in a way we must balance our own experience in selecting the winner. We hope that the runner-ups will eventually try their ideas and let us know.

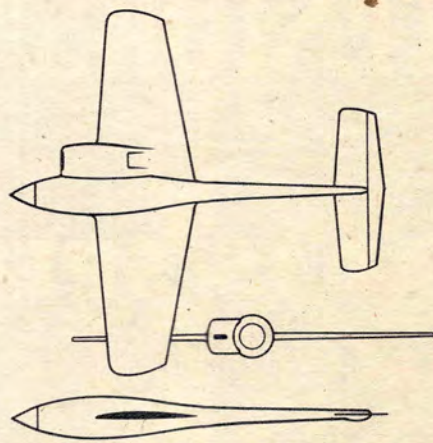
The conventional speed models have more or less settled into a certain lay-out formula: just enough wing area to obtain stability and level flight. If we stood on a tower, we could do without the wing and let centrifugal force keep the model from winding in around us.



All-wing "Skeeter" has 14.25 sq. in. of wing area and Baby Mac power. Airfoil is a near diamond. Cpl. Thomas A. Hall, Essex, Md.



Wing built with 30 deg. bank in this Cub .074 entry by Gary G. Witt, Mankato, Minn. Sidewinder's fuse conventional; wing, thick.



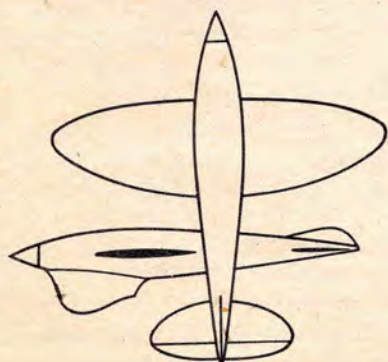
Minimum frontal area design by Sgt. Robert F. Pauley, Barksdale AFB, La. Max. fuselage dia. 1 3/16"; boom is wrapped balsa tube.

At one time we analyzed a 150 mph speed job as to lift while moving at 150 mph. Using the standard formula, we obtained a lift of 34 ozs. The model weighed 36 ozs. Thus, we were close enough to make us take theoretical aspects more seriously.

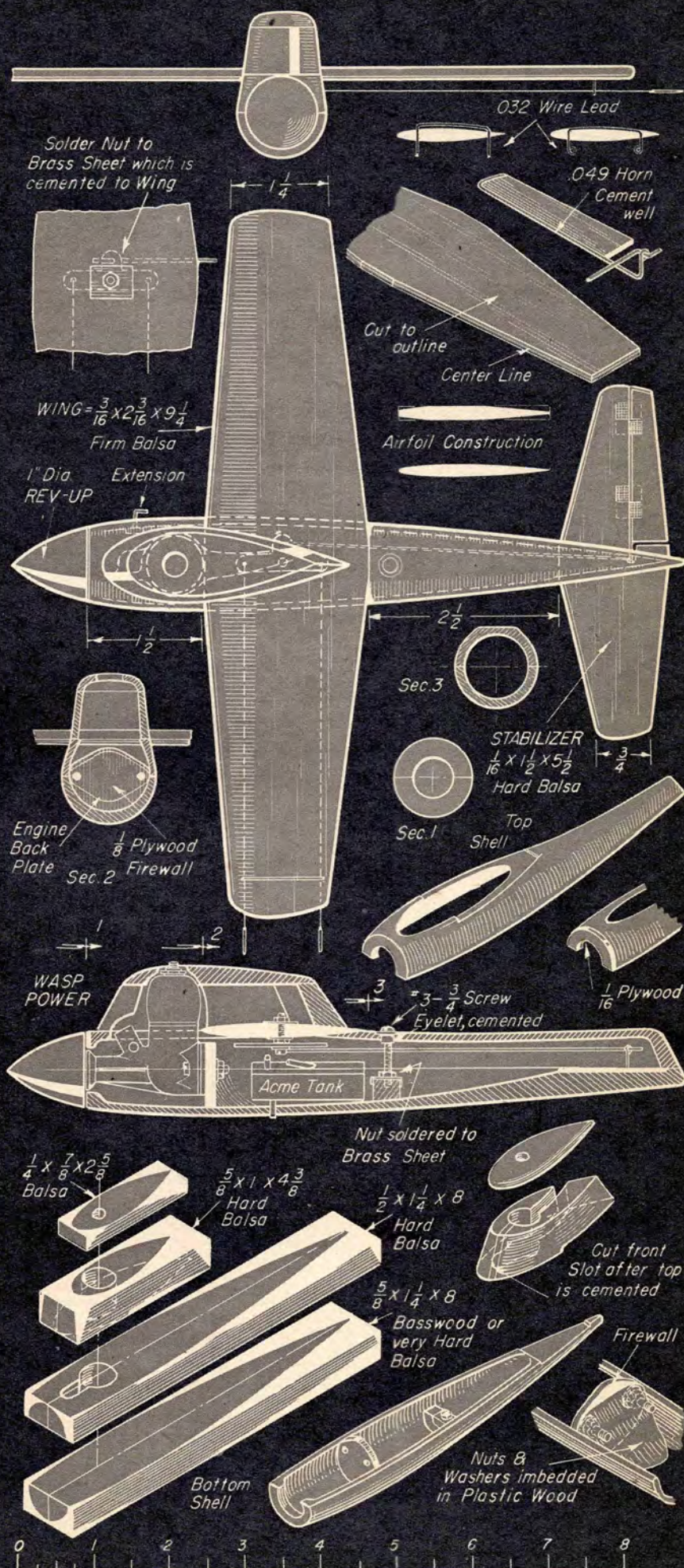
The airfoil used on Sgt. McConnell's model has a flat bottom with leading edge high up, almost like a streamlined airfoil. By calculation, we found that at 0 deg. angle of attack it would lift 34 ozs. at an impossible 150 mph. This means that the model was flying level at its minimum drag position. Then we assumed the stalling angle would be 6 deg., and found that its landing speed would be 68 mph. A bit more calculation gave us a centrifugal force pull of 34 pounds. By all this, one begins to see what goes on when a model is trying to pack in a few more miles per hour.

The winning design was modified slightly for construction. The layout was left alone. There is nothing startlingly new, but it is structurally possible and well proportioned. The streamlined airfoil might require about 1 deg. positive flight attitude to obtain the required lift for level flight. By having the flat bottomed portion behind the center of the wing, the airfoil should provide sufficient lift at 0 deg. at high speed to maintain a very flat, smooth circle.

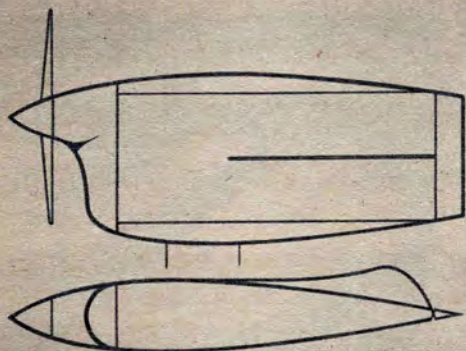
Begin construction with the



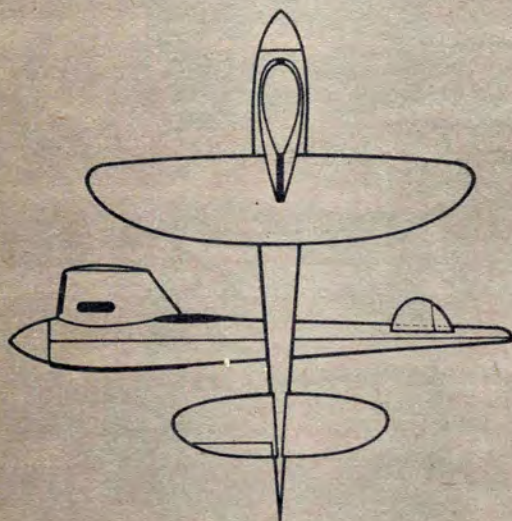
Inverted engine, round-the-pole or control line speedster by H. Fraser, Waterloo, Ont. Baby Mac; span & lg., 10"; 23.5 sq. in.



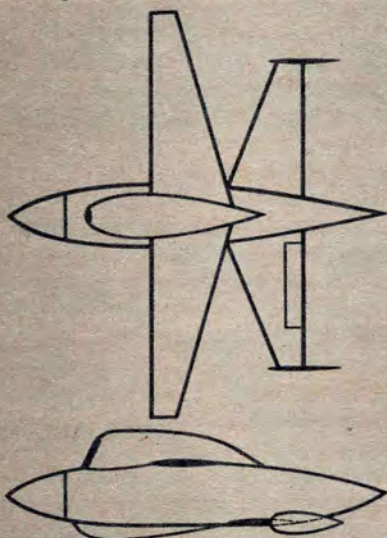
WEE WHIZZ WAGONS



Engine side-mounted in "Flying Flounder" by AMC Tom Henebry, USN, Patuxent River, Md. Symm. wing section, 25 sq. in.; K&B .049.



From Havana, Cuba, this butterfly tail, Royal Spitfire powered smoothie. By S. A. Orrett. Span, $8\frac{5}{8}$ " ; lg., $11\frac{5}{16}$ " ; total wt., $4\frac{1}{8}$ oz.



Wasp powered Duo-Mono design by E. G. Micklewright, Toronto, Ont. Span, 8 in.; lg., $7\frac{5}{16}$ ". Hollow fuse skid, bamboo rudder skids.

wing. Cut to outline given. To obtain a symmetrical airfoil, use this definite procedure: Draw a centerline all along the edges (thus dividing the thickness of the wing). Then cut flat-angled surfaces as shown. This will give you an approximate streamlined airfoil. Sand corners and you will have the wing section done. Sand smooth all over. Apply two coats of clear dope. Sand smooth. To obtain extra strength, dope with a 50-50 mixture of dope and cement. About two coats will do the trick. Again sand smooth.

Cut the stabilizer to outline and sand smooth. Round off corners. Give same dope treatment as the wing. If the stab tends to warp under dope, make another one using more dope and a plasticizer.

For the fuselage select the grade of balsa specified. If possible, use hard wood for the bottom shell. Draw center lines and outlines as shown. Use side and plan views to obtain the correct outlines. Cut out for fitting wing and stabilizer so that when blocks are assembled the two surfaces will be in correct place and properly lined up. By doing this now, you are assured of true line-up throughout the construction no matter how the cross section of the fuselage is carved later.

Cut and drill firewall to outline given. Now, take the bottom shell, mark the position of the firewall and carve out enough space so that the firewall will fit snugly. This will give you a base from which to carve the rest of the model.

Fix the engine to the firewall, and carve out the front portion of the shell until the engine fits so that its center is in line with the top of the shell. Cement firewall in place, using the engine to obtain zero thrust.

Drill top shell for cylinder and intake. Then carve out the portions that prevent the top shell from meeting the bottom shell. After the shells meet, cement-tack them together.

Before continuing, drill cylinder hole in the cowling. Cut and carve the cowling to shape. Fit it over

the engine so that it will rest on the top shell, which is still rectangular, and draw its outline on the shell. This provides the carving limits.

Cut the fuselage to an approximate top and side view. Work to obtain square or rectangular form to side and plan view. Don't start rounding until this is done. Next add the spinner to the engine, which is fixed to the firewall. Using the spinner as a "landmark," gradually carve the fuselage to cross section given. The outside of the fuselage can be finished to its final stage. Apply two coats of clear dope; follow by sanding. And then two coats of 50-50 mixture.

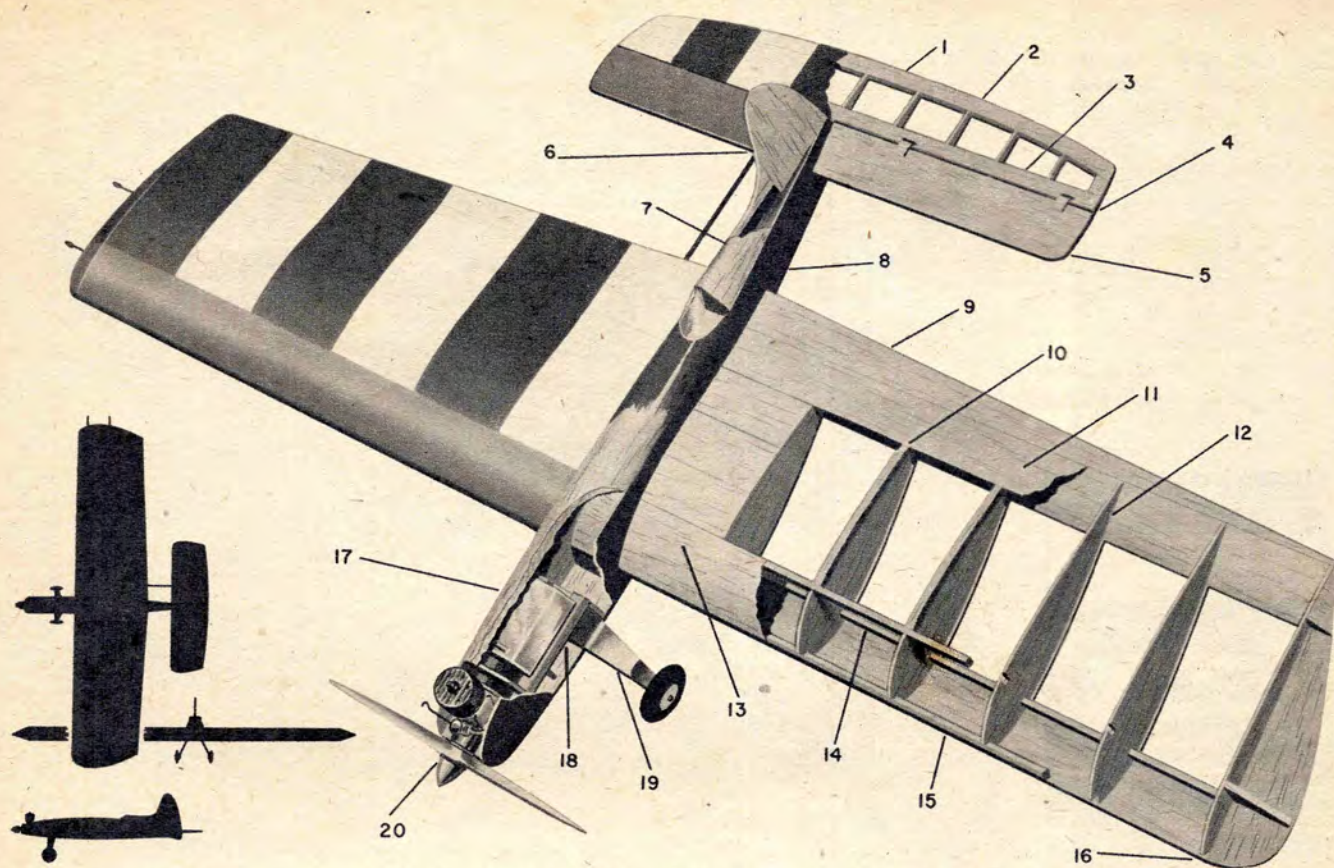
Separate the two halves and finish the internal carving. This is done by working gradually and checking the wall thickness. The thickness shown is approximate. If balsa is light, use thicker walls. Be sure to have generous thickness on the bottom to absorb landings. It is advisable to coat the bottom with several extra coats of 50-50 mixture.

The firewall is now fixed solid by "filleting" with Plastic Wood. Note how nuts and washers are anchored to prevent turning. This is done by having the engine in place while Plastic Wood is drying. The bolts will loosen up when turned later. To make sure the nuts will not turn in case the Plastic Wood is not dry, cement them in place before applying it.

The two shells are held together with a bolt. Note how the nut is soldered to a brass sheet which in turn is keyed and cemented to a balsa block. Lots of cement all over will be a big help. The engine keys the shells in front.

Tank is cemented in place. You may have to relocate the top vent to provide for side filling or whatever you find necessary to give clearance for the bellcrank. Your tank selection will determine this construction.

The wing can now be fitted with the bellcrank. Top nut is soldered to a brass sheet to provide surface area (Continued on page 59)



(1) Sheet trailing edge cut to outline; (2) strip ribs; (3) spar strip; (4) dowel hinge; (5) sheet stabilizer; (6) sheet fin cut to outline; (7) sheet cabin covering; (8) sheet fuselage sides bottom & formers cut to outline; (9) sheet trailing edge; (10) cap strips; (11) trailing edge sheets top & bottom; (12) ribs cut to outline and notched;

(13) sheet covering for leading edge & center section; (14) square spar stock; (15) square leading edge; (16) sheet tips cut to outline; (17) shaped cowl block; (18) hardwood engine bearers & gear mount; (19) aluminum sheet landing gear shaped & formed; (20) engines .29 to .49 recommended.

Top star on Harold deBolt's All-American Team of control line models is this big stunter



**DESIGN:
ALL-AMERICAN SR.**

**MADE BY:
DMECO**

**CATEGORY:
STUNT**

■ The latest and greatest in a series of models graduated in both price and complexity is now offered by deBolt Model Eng. Co., Williamsville, N. Y. The fourth ship of their All-American line, the *Senior*, is a big job, suited to the hottest engines in the .29-.49 group, and needless to say, it will do everything the most

experienced stunt man asks of it.

As a basic point of design, the *Senior* features Dmeeco's exclusive "asymmetrical stability," which allows full stunt performance with no motor or rubber offset, and no weight in the outer wing. Though of more or less standard appearance, all components have been located with care, so as to provide the maximum possible in performance. Wing loading has been kept low by designer Harold deBolt, whose experience has shown there is no way to beat a light ship with lots of area.

The kit is made up of the highest grade of balsa selected for this particular plane. The wood is not die-cut, but is machined with the aid of master patterns and jigs. This makes it possible to use heavier grades of wood where needed, and in the sizes the designer specifies. Because of this manufacturing process, all parts are smooth-edged and ready for use.

The kit includes a cut and shaped dural landing gear that is similar in appearance to those seen on many team racers. The gear is springy, but very compact; it does not interfere with the fuel tank mounting, yet is a cinch to install.

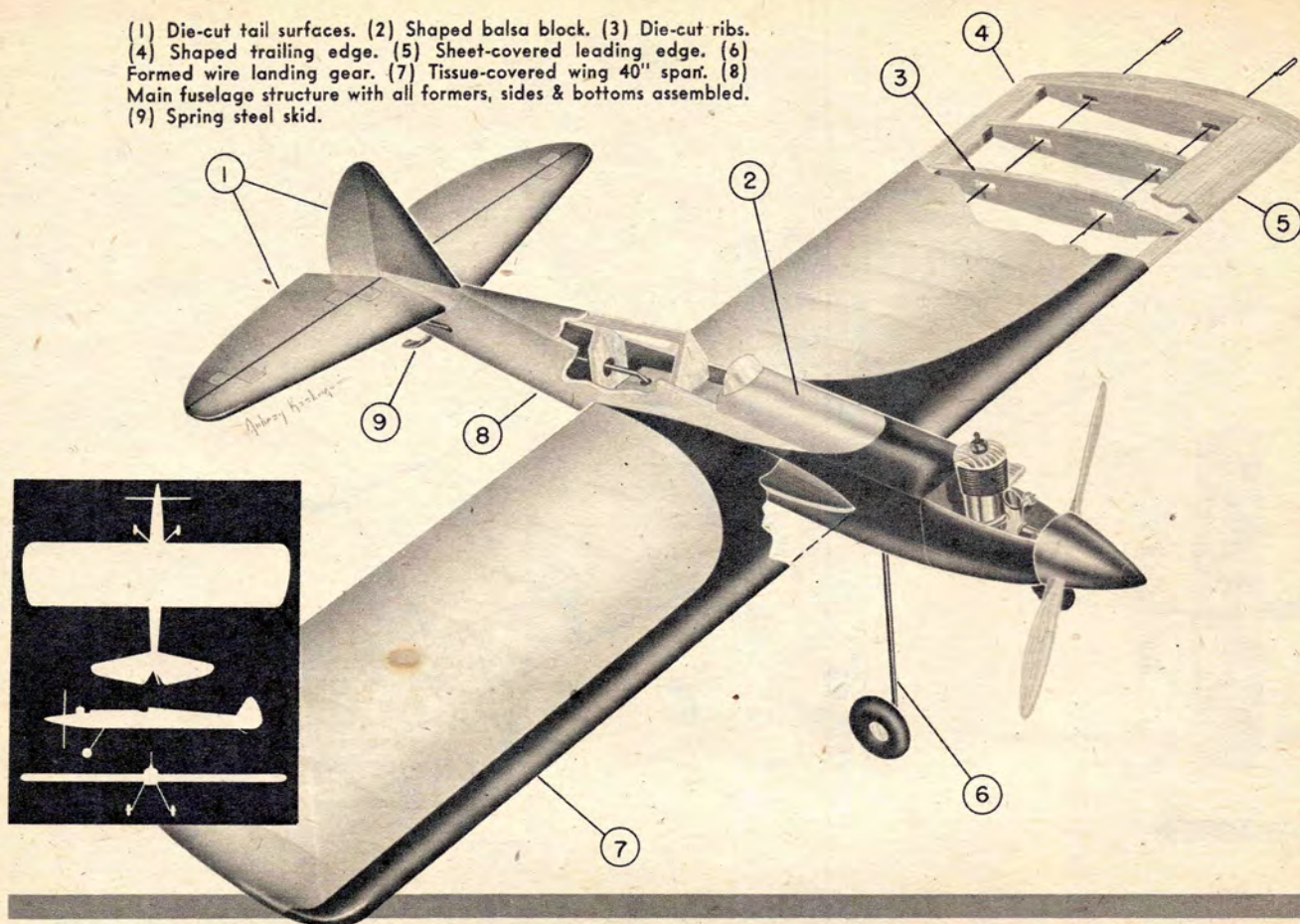
In some kits the builder reads vaguely that the plane is suited for engines from this size to that; not so with the *Senior*. A series of engines have been tested in it, and the plan carries a chart showing precisely which combinations of engine and prop worked out best. Even the proper fuel tank is specified exactly!

The plane has already scored within 10 points of perfect in four meets. Even at the Mirror Meet, where a really tough flight plan is enforced, the *Senior* scored 335 out of a possible 350 points.

Designer deBolt likes to fly exhibitions in a strong wind, and do the entire flight pattern, except level flight maneuvers, in less than a quarter of a lap! Would you like to try that with your stunt ship?

The *All-American Senior* is, of course, somewhat more complex than the earlier three ships of the series. However, assembly is actually easy, for you can build the wings right over the full-size plans, and the fuselage is a sort of rounded-off box. The finished ship weighs about 28 oz., quite light for a controliner with 510 sq. in. of wing area. Span is 51" and fuselage length 24½".

- (1) Die-cut tail surfaces. (2) Shaped balsa block. (3) Die-cut ribs. (4) Shaped trailing edge. (5) Sheet-covered leading edge. (6) Formed wire landing gear. (7) Tissue-covered wing 40" span. (8) Main fuselage structure with all formers, sides & bottoms assembled. (9) Spring steel skid.



Featuring a Redi-Built fuselage section, the Vampire has made its mark in Western circles



■ A really novel idea is the big feature of this stunt ship kit—the main section of the fuselage comes to you all cut out, glued together and sanded! This sort of “super-prefabrication” should be appreciated by beginner and expert alike.

The Redi-Built section comprises bottom, sides, and three bulkheads. These parts have been

glued up on a jig and are, of course, in absolutely true alignment. To complete the fuselage you need add only the rear turtle-deck, forward fuselage deck (cut to shape), and the nose details.

A product of F-B Model Aircraft, 3240 Larimer St., Denver, Colorado, the *Vampire* was designed by Bill Fox and Jerry Seracuse. It is a Class B-C plane of 360 sq. in. area and 40" span. The favored engine is any of the hot 29's, with a 10/6 prop. At lower altitudes a 9/6 prop would probably do as well, or even better. The finished plane should weigh about 32 oz. for top results.

The plans are quite small, but this is permissible since wing trailing edge is notched for the ribs, the fuselage is three-quarters completed when you get it, and the all-balsa tail surfaces are die-cut. Plenty of instructions and detail sketches are incorporated on the sheet.

The designers are especially proud of another assembly detail—the method of installing the landing gear. The preformed wire is held to the main bulkhead by

means of cotter pins pushed through ready-drilled holes. This bulkhead is of $\frac{1}{4}$ " hard plywood and is one of those installed before you receive the kit.

The hardwood motor mounts slide through slots cut into the front bulkhead (pre-installed) which is also of hardwood. The motor may be left open, or semi-cowled, with the balsa blocks supplied.

The wing is a typical thick symmetrical stunt type, with a heavy tapered trailing edge, and leading edge formed of a $\frac{7}{32}$ "x $\frac{1}{2}$ " spar plus $\frac{1}{16}$ " planking top and bottom. The entire wing is planked for several inches on each side of the fuselage. The fuselage sides are pre-cut to allow installation of the finished wing. Tips are 1" wide blocks cut to airfoil cross-section.

As mentioned above, tail surfaces are all $\frac{3}{16}$ " thick balsa, with elevators in two halves, hinged by fabric tape.

The finished ship is one of simple, pleasing lines. Extensive flight trials in competition have already netted the designers first places in quite a few Midwest meets.



**DESIGN:
HOWARD IKE**

**MADE BY:
MASTER MODELRAFT**

**CATEGORY:
SCALE**

■ Our scale job this month is a very accurate copy of Ben Howard's sleek racer, reduced in size to take "large Half-A" engines, that is, those from .049 up to .09. A product of Master Modelcraft, 727 Westchester Ave., New York 55, N. Y., this is intended for the flyer who wants a ship fitting into the class of Half-A team racers. There is no such class officially, of course, but such events have been flown in many contests and are popular at impromptu club gatherings. If you want a fast plane that

fulfills the "realistic" specifications, Ike is your dish.

The finished plane will come out to 20" span, 15" length, and will weigh about 6 oz. less engine. For a real flying hot rod, put in a Cub .09 or McCoy 9 and watch her go! Designer Stan Lapin emphasizes that this is not a stunt job despite the symmetrical wing cross section; other than loops and wing-overs, better keep away from aerobatics. But for getting up and tearing around in level flight, this is the ship.

Prefab is extensive, of course. The fuselage comes in two halves, shaped outside and hollowed in. The lower half is beveled for the wing, and the bevel is given dihedral—when the two wing panels are cemented in place they will assume the correct angle, for the fuselage cut-out is shaped to produce this result.

Landing gear consists of two formed wire members, and the necessary drilled hardwood wheels. Also furnished are all parts needed to make wheel pants. The latter add a lot to appearance; however, they are naturally tricky to install, and the novice is well-advised to omit them. The pants are built up sandwich fashion, with 3/32" thick sides and a 1/4" center "filling." Plenty of scrap is left over from the die-cut sheets for landing gear fairings.

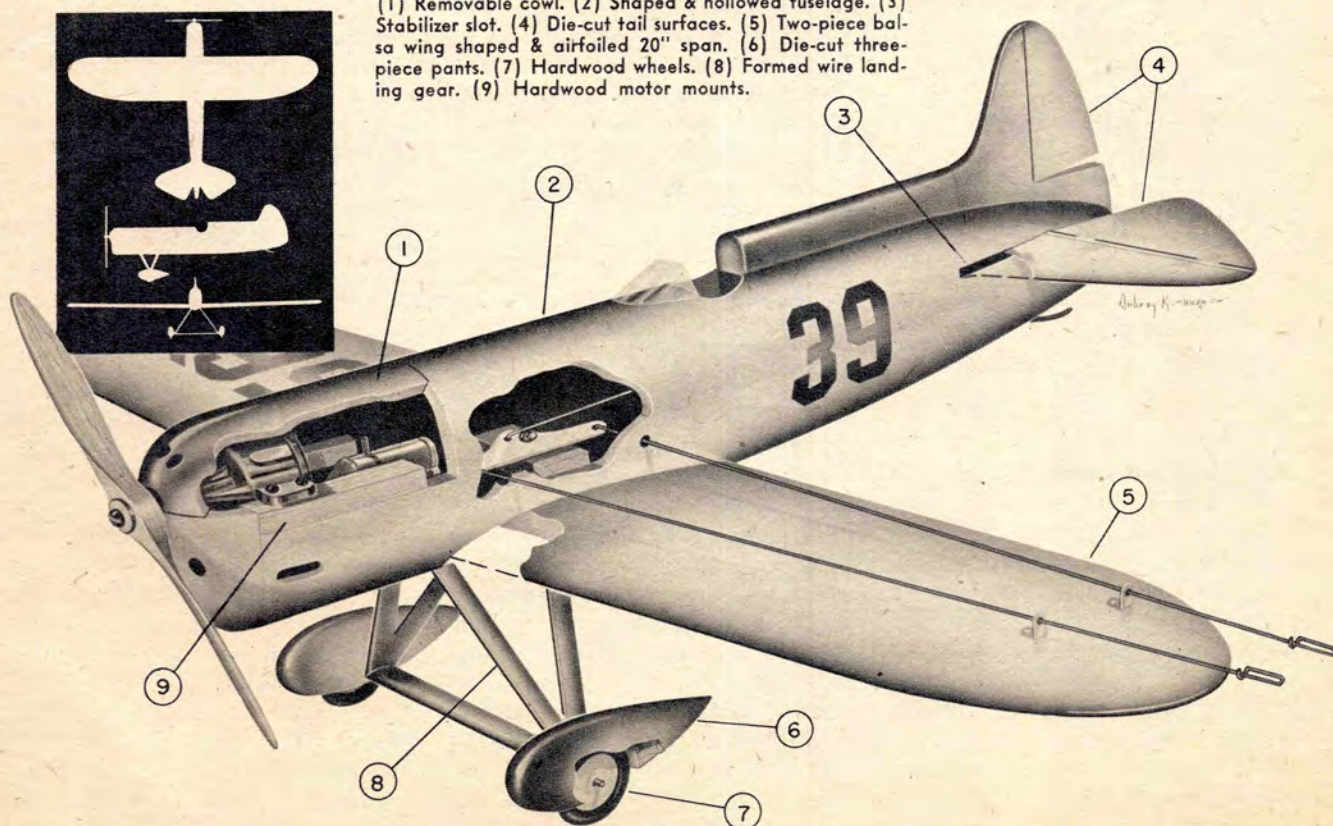
Three-ply hardwood strips are used as beam-style motor mounts, and a block of the same ply is included to hold bellcrank. The aluminum bellcrank is furnished, as are screws and washers to mount it, and to hold engine. Wing tip wire guides in the form of small copper lugs are to be cemented at designated positions, and another larger lug in the hardware envelope is for use as a control horn. Position, installation, and adjustment of all control system components are fully covered in drawings and instructions.

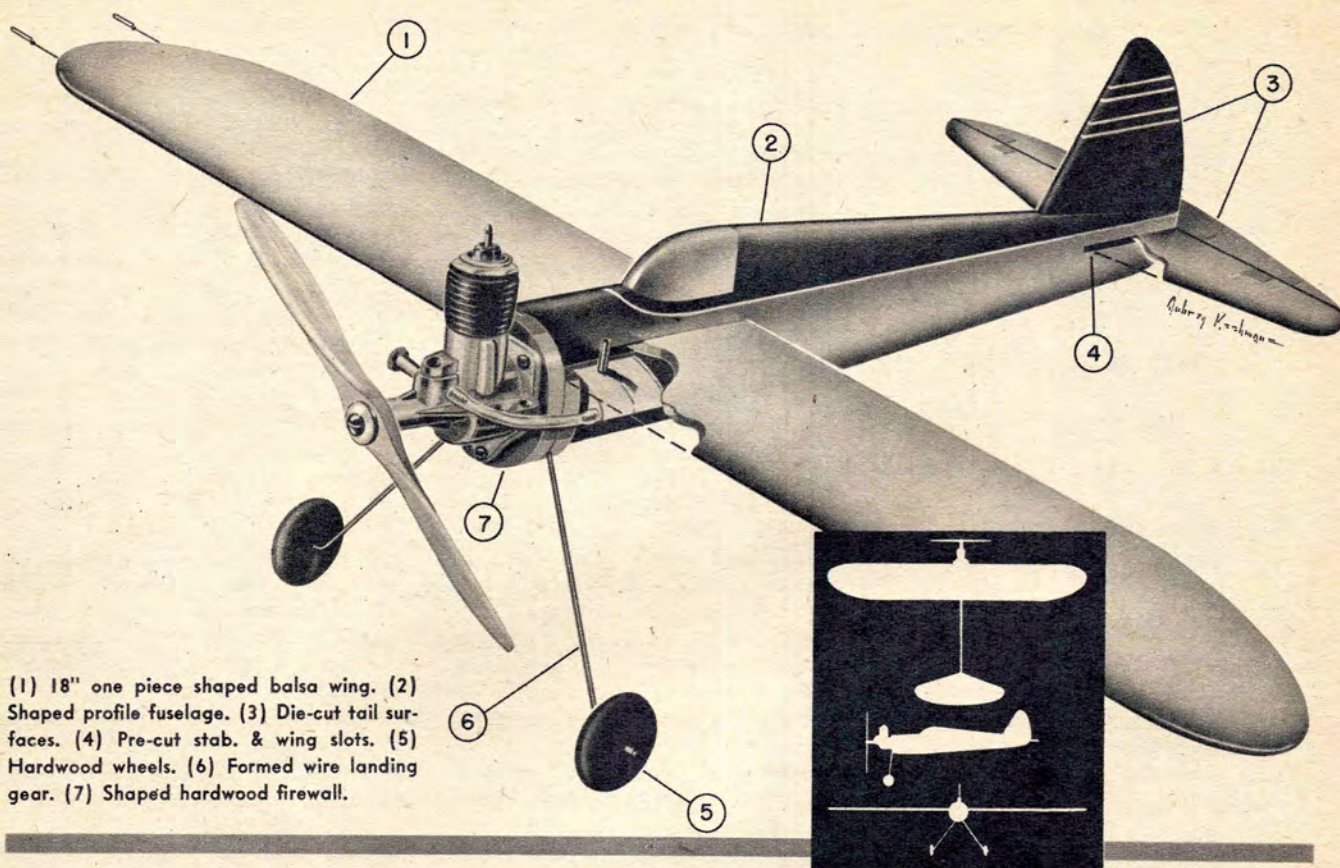
The two wing panels are shaped to final planform and airfoil section, but must be trimmed at tips and beveled at butt ends before assembly. Horizontal tail surfaces are in a sharply die-cut 1/16" sheet; the rudder is 3/32" stock. These parts are all of smooth well-finished balsa. The shaping job on the wing panels and the two fuselage halves is of high quality; surfaces require only light sanding before doping.

The cockpit for Ike's pilot is milled out, and celluloid for the windshield is in the kit. You also get a shaped headrest block, Flightex material for hinges and reinforcing wire for pushrod, etc.

The plan sheet has a single large phantom, or cutaway, view of the finished racer, plus many detail sketches. Instructions are complete.

- (1) Removable cowl. (2) Shaped & hollowed fuselage. (3) Stabilizer slot. (4) Die-cut tail surfaces. (5) Two-piece balsa wing shaped & airfoiled 20" span. (6) Die-cut three-piece pants. (7) Hardwood wheels. (8) Formed wire landing gear. (9) Hardwood motor mounts.





(1) 18" one piece shaped balsa wing. (2) Shaped profile fuselage. (3) Die-cut tail surfaces. (4) Pre-cut stab. & wing slots. (5) Hardwood wheels. (6) Formed wire landing gear. (7) Shaped hardwood firewall.

This perky little pursuit by Joy packs a big punch; Pee Wee Pup is simple, clean-cut



■ A line of well-thought-out Half-A control line kits has been marketed by Joy Products Co., Inc., Menominee, Mich. Aimed at the beginners, all three numbers of this "Simplikit" profile series are of the most elementary construction. There is even a saucy little biplane called the Stunt Runt, which, despite the fact it is a profile job, has very neat lines and lots of "novice appeal." The second

ship in the series, named Pee Wee Pursuit, is a 20" span midwing monoplane of a little more complexity—and slightly higher cost—than the *Pee Wee Pup*, our subject here.

The *Pup* is really noteworthy in that it appears to be the only nationally distributed control line kit job selling under \$1.00—you can take one home for only six bits. At this price one would rather expect an ultra-simple kit of somewhat shoddy materials. It's simple all right, but the materials are of top grade; you count only eight wood parts as you open the box. One of these, of course, is the die-cut sheet (and as sharply die-cut as you'll ever see!) of balsa containing all the tail group parts.

The fuselage is ready-cut to shape from a heavy grade of 1/4" thick balsa. It is slotted for both wing and stab. There is a hardwood disk for motor mounting, which even has a circular groove cut in the forward face to enable easy installation of Baby Spit engines. With this style of mount, of course, the Spit tank must be removed; a separate tank is fastened under the wing for all en-

gines, except the K&B's with their bottom-mounted tanks. The plane has been flown with all size engines from .02 to .049, but the Infant is not recommended. Anything larger will do the job, though, and with an .049 this is a really lively *Pup*!

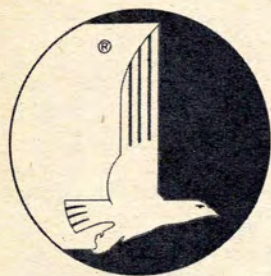
The wing is cut to outline shape and requires only a bit of sanding on the edges to ready it for doping. The flying surfaces are all of very clean, smooth 3/32" thick balsa. The wing is cemented in the fuselage slot and is braced by two support blocks that back up the motor mount and also brace the landing gear.

The gear wire comes bent to shape, of course. Wheels are husky hardwood disks drilled to a good fit on the wire.

The plans are simple but entirely adequate; they include top and side views of the finished plane, an exploded assembly drawing, and step-by-step plans. Views of several different motor installations are given.

Specifications of the *Pee Wee Pup* are as follows: Span, 17 1/2", fuselage length, 14", weight less engine, 2 oz., wing area, 50 sq. in.

EASTERN AIR LINES



INSISTS ON THE BEST!



Eastern Air Lines uses Speed-O-Laq "Flight Tested" Dope, because Speed-O-Laq meets the high requirements of Eastern Air Lines experts!



SPEED-O-LAQ



MODEL AIRCRAFT DOPE

The Only Complete Line of Authentic Colors

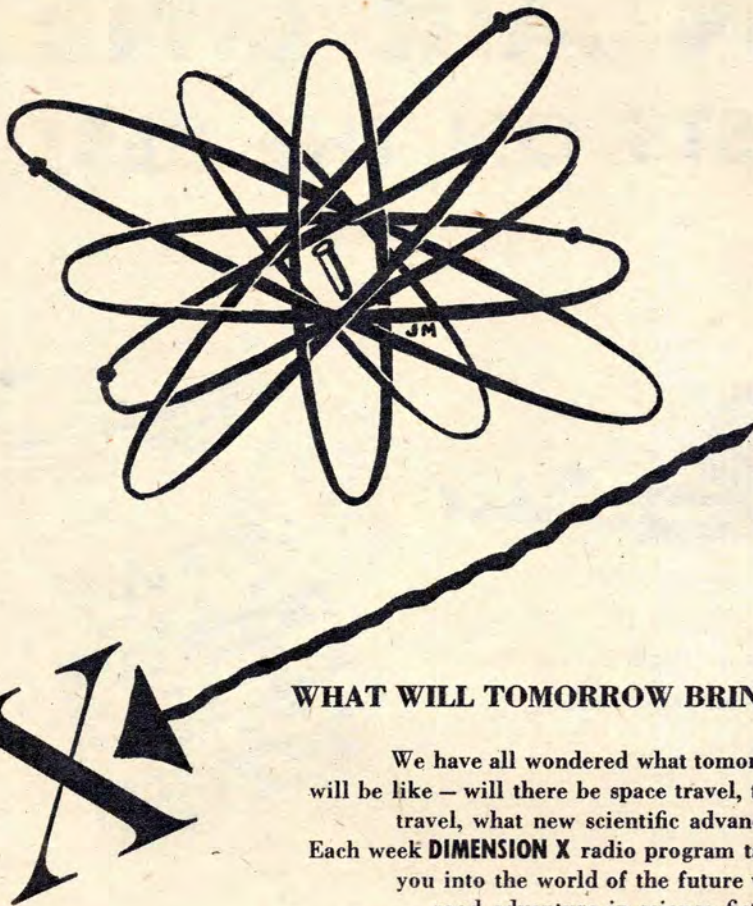
Insist on SPEED-O-LAQ...choice of the airlines! Give your plane that professional look. At your nearest hobby counter!

10¢

Ask for SPEED-O-LAQ Cement, too!

SPEED-O-LAQ

SPEED-O-LAQ PRODUCTS CO., INC.
2386 Wycliff St., St. Paul 4, Minn.



WHAT WILL TOMORROW BRING?

We have all wondered what tomorrow will be like — will there be space travel, time travel, what new scientific advances? Each week **DIMENSION X** radio program takes you into the world of the future with good adventure in science fiction.

DIMENSION X comes to you every Thursday through the combined efforts of the National Broadcasting Company and **ASTOUNDING SCIENCE FICTION Magazine**.

For the best in science fiction

- read **ASTOUNDING** each month
- hear **DIMENSION X** every Thursday

DIMENSION X: Consult your newspaper for the time on your local N.B.C. radio station.

NATIONAL BROADCASTING COMPANY, NEW YORK, N. Y.

Dummy Lifter

(Continued from page 41)

with very fine paper between each coat.

Cabin looks weak, doesn't it? Well, have no fear, because the addition of sheet celluloid adds greater strength than is possible through the use of paper covering. Use pins or clip type clothespins to hold the celluloid in place while the cement dries.

Careful work on dethermalizer assembly will eliminate all difficulties which can occur. Mount two small brass grommets to bottom of stab as indicated. Cover these with cloth or silk reinforcement. Check their alignment with the hinge pins and correct if they vary too much. Note that hinge pins are not perfectly straight. They have a slight right-angle bend about $\frac{1}{8}$ " from the tubing. This is put there so that the wire can pass around the thickness of tail platform and trailing edge. All the small rubber hooks can be made from straight pins if a shortage of wire exists.

A small hole is drilled into the $\frac{1}{4}$ " rib in stab to take $\frac{1}{16}$ " dowel mounted in the sub-rudder. This should produce a snug fit. Soft copper, or milk bottle wire, is used to make adjustment clips at front and rear of this rudder. The other rudder is permanently glued into position. After doing this add the small plywood tab at leading edge of stab. The purpose of this tab is to produce an air gap between the stab and the dethermalizer fuse.

Mount the engine and your favorite fuel cut-off and you are all set. Unless you want to add a little trim, you can go out to fly. Make sure you have at least four coats of fuel proofer on nose section of fuselage.

The original model balanced, loaded or empty, at exact point shown on the plan. This is directly in the center of the occupant compartment. Offset the rudder for a slight left turn and glide model over some tall grass. For first tests, leave occupant out. A slow steady glide will result. If the model shows extreme stall or glide characteristics, trim these out before trying a powered flight.

Don't be too critical, as all models glide differently when they get into the air. Use wide-open power for first flight and a motor run of about five seconds. Poor power characteristics become just as apparent when using short motor runs, and prove to be less disastrous.

The model has an inherent turn to the right with neutral settings. For this reason you should use left rudder until a shallow right climb occurs. The glide will be fairly tight to left if this process is used. When satisfied with the performance, you should add the occupant and fly on your original settings. The only difference in flight is an increase in gliding speed which will prove much to your advantage on a windy day.



"What's the date today?"

Sweeping the Country!



Watch the Wasp at the Nationals!
2 out of the first 3 places
in all $\frac{1}{2}$ A events at
the 1950 Nationals.

Wasp.049

DISPLACEMENT

By Far the Best in
Its Class



ATWOOD MANUFACTURING CO. PICO, CALIF.

Flash!

'51 NATIONALS
DALLAS, TEXAS

BARNSTORMER WINS AGAIN!

BARNSTORMER

Wing Span 47 in. Weight approx. 26 oz.
Wing area 470 sq. in. Speed 60 to 75 M.P.H.
Length 30 3/4 in. Engine23 to .35 disp.

Here is the sensational performance record—SENIOR STUNT EVENT won by Buzz Ferguson with 390 1/2 points. OPEN STUNT EVENT won by Lou Andrews with 418 points. Lou won the National Stunt Championship (for highest score) and with it the coveted Jim Walker Trophy.



\$5.95

CLASS 1/2A CONTROL LINE STUNT MODEL BABY BARNSTORMER

A JUNIOR VERSION OF THE 1950 NATIONAL STUNT CHAMPION TRIXTER BARNSTORMER

FINE
TRIXTER
MODELS

DESIGNED BY LOU ANDREWS



Wing Span 23 1/2 in.
Wing Area 118 sq. in.
Length 15 1/2 in.
Weight approx. 4 1/2 oz.
Engine033 to .049 disp.

\$2.95

GUILLOW'S SHELF MODEL AIRPLANE KITS

18 EASY TO BUILD SCALE MODELS
ALL MILITARY - INCLUDING 10 JET JOBS
EASY ASSEMBLY - NO DIFFICULT CARVING



MCDONNELL F2D-1 BANSHEE



DOUGLAS AD-1 SKYRAIDER



N. A. B-45 TORNADO



BOEING B-29 SUPERFORTRESS



CURTISS P-40 WARHAWK



RUSSIAN MIG-15



REPUBLIC F-84 THUNDERJET



N. A. P-51 MUSTANG



GRUMMAN F9F PANTHER



LOCKHEED C-49 CONSTELLATION



LOCKHEED P-80 SHOOTING STAR



VOUGHT F7U CORSAIR



LOCKHEED P-38 LIGHTNING



N. A. F-86 SABRE



BOEING B-47 STRATOJET



REPUBLIC P-47 THUNDERBOLT



VOUGHT F4U CORSAIR



NORTHROP F-89 SCORPION

BOYS! HERE ARE 18 OF THE EASIEST BUILDING SCALE MODELS EVER OFFERED. EACH ONE IS A DUPLICATE IN MINIATURE OF A WELL KNOWN FIGHTER WITH GUILLOW'S DIE-CUT SOLIDS, YOU DON'T HAVE TO SPEND LONG HOURS CARVING BLOCKS TO SHAPE - JUST ASSEMBLE

THE DIE-CUT PARTS IN A JIFFY AND ROUND UP THE EDGES WITH A KNIFE OR SANDPAPER. ALL YOU NEED BESIDE A KIT IS A TUBE OF MODEL AIRPLANE CEMENT - THEN YOU ARE SET FOR AN EVENING OF FUN. ONCE YOU HAVE STARTED, YOU'LL WANT TO BUILD THE WHOLE ASSORTMENT.

25¢

NOW AVAILABLE - 2 NEW HELICOPTERS!



TRANSPORT

NEW TANDEM ROTOR HELICOPTER DESIGNED FOR BOTH MILITARY AND CIVIL TRANSPORT.



SIKORSKY HO-5

THIS HELICOPTER HAS WON CONSIDERABLE PRAISE FOR ITS EXCELLENT WORK IN KOREA.

Boys!

SEE YOUR LOCAL DEALER FOR GUILLOW KITS - IF NOT AVAILABLE, SEND DIRECT TO FACTORY, ADDING 15¢ TO ALL MAIL ORDERS

DEALERS! SEND FOR LATEST CATALOG AND PRICE LIST

GUILLOW'S

FLIGHT TESTED \$1.00

AIR YOUTH TODAY.



AIR LEADERS TOMORROW

FLYING MODEL Airplane Construction Sets

FULL-SIZE PLAN • ILLUSTRATED INSTRUCTIONS • AMPLE BUILDING MATERIALS



BELL P-39 AIRACOBRA



N. A. P-51 MUSTANG



SPITFIRE



CURTISS SB2C HELLDIVER



LOCKHEED P-38 LIGHTNING



STINSON VOYAGER



PLASTIC PROPELLER



RAZOR SHARP DIE-CUT Balsa PARTS
NO CUTTING—JUST PRESS OUT AS NEEDED!

GUILLOW'S

REALISTIC SCALE AIRPLANE FLYING MODEL Construction Sets

50¢ EACH

★ FLIGHT TESTED DESIGN
★ ILLUSTRATED DIRECTIONS



CESSNA



AERONCA CHAMPION



VOUGHT CORSAIR



SPITFIRE



BRITISH SE-5



WACO CUSTOM



MONOCOUPÉ



HAWKER HURRICANE

SPECIAL VALUES
IN EACH KIT

RAZOR SHARP
DIE-CUT Balsa PARTS

NO CUTTING—JUST PRESS OUT AS NEEDED!

SHAPED NOSE BLOCK

PLASTIC PROPELLER

The die-cut parts in these kits make it easier for the model builder to complete his airplane. Full size plans, step-by-step illustrated instructions and patterns for stiff paper and tissue covering are also included.

manufactured by **PAUL K. GUILLOW** Wakefield, Mass.

DYNA-JET

FAMOUS JET MINIATURE
GASOLINE ENGINE

THE Super Engine . . .



4 1/4 lb. Thrust
16 oz. Weight
21 in. Long
2 1/2 in. Diam.

No Wartime Shortages

For Dyna-Jet Owners

- WILL NOT WEAR OUT! No bearings, shafts, rods, pistons, cylinders to wear out or require replacement. Your Dyna-Jet will still run like new after many years of use.
- NO SPECIAL FUELS REQUIRED! Runs best on plain gasoline. Does not use war scarce nitro chemicals or methanol.
- NO PROPELLERS TO REPLACE!

JET PROPULSION! The greatest development in the field of aviation. Be modern, gain enjoyment plus knowledge with the world's finest miniature engine!

SUPER POWERED! More than 4 1/4 lbs. guaranteed thrust . . . the equivalent of 3 HP at 190 mph with 70% propeller efficiency . . . 1948 AMA speed record of 179.03 mph.

EASIEST STARTING! Most practical and reliable engine ever built. No propellers to break. No ignition system to burden your model. No bearings to wear out. No expensive, special fuels to buy or mix.

MOST ECONOMICAL! Will not wear out. Constant high resale value. Savings on propellers and fuel alone pay the difference in cost between Dyna-Jet and cheaper engines.

OFFICIALLY ACCEPTED! Accepted for contests by AMA, and by modelers the world over.

HOLDS ALL WORLD RECORDS for Jet models.
GUARANTEED! 1. To start easily with hand tire pump. 2. To equal or exceed the advertised thrust. 3. Against defective materials or workmanship.

\$35.00 at your Dealers. If he can't supply, order direct. Immediate Delivery!

Shewlin MANUFACTURING COMPANY

DAYTON MUNICIPAL AIRPORT • VANDALIA • OHIO

WARNING

Make sure you are getting an all brass fuel tank for your engine. Don't take chances with plated tanks. An Acme all brass tank is your best engine insurance.



55¢ ea.
1/2"-1"-1 1/2"-2" LONG
2 1/2" SIZE 60c



60c ea.
A MUST FOR FREE FLIGHT



75¢ ea.



85¢ ea.
1 1/2"-2 1/4"-3" LONG

- Every tank is tested under water with air pressure
- Every tank is complete with mounting bracket
- Every tank is guaranteed against rusting (whoever heard of brass rusting)
- Every tank is inside and outside soldered
- Every tank is absolutely vibration proof

ACME TANKS ARE SOLD AT ALL LEADING HOBBY SHOPS

ACME MODEL ENGINEERING CO.

8120—7th Avenue,
Brooklyn 9, N. Y.

WHOLESALE
ONLY

Easy Does It!

For Hobbycraft Dealers Everywhere

It's easier to run a model and hobby store with National's Check List to help you. Keeps you informed. Makes ordering and stock-keeping a cinch. Simplifies all retail operations, big or little. Now 70 pages, listing more than 10,000 of the best selling hobbycraft items. Model railroads, airplanes, ships, engines, engine parts, race cars, tools, supplies and handicraft items. Write today.

NATIONAL MODEL DISTRIBUTORS,
2516 N. Greenview Ave., Chicago



Best free flight of British contest season was "Jaded Maid". This one by H. A. C. Savage, Croydon, is powered by Elfin diesel.

Dope Can

News, Views, Comments and Photos from Model Clubs and Enthusiasts in U. S. and Overseas

■ Europe retained the Wakefield Cup for the third year running when Sune Stark of Sweden took top honors in the hotly contested event held on July 6 and 7 at Jami-Jarvi, Finland. Great Britain came in second and Italy third. Austin Hofmeister of Baltimore was the highest American flyer with his 5th place. Manuel Andrade of Oakland was 7th. A full team of 6 U. S. flyers participated through the generosity of Jim (AJ Aircraft) Walker, who provided the overseas airline trips, and other individuals and firms who helped underwrite additional expenses.

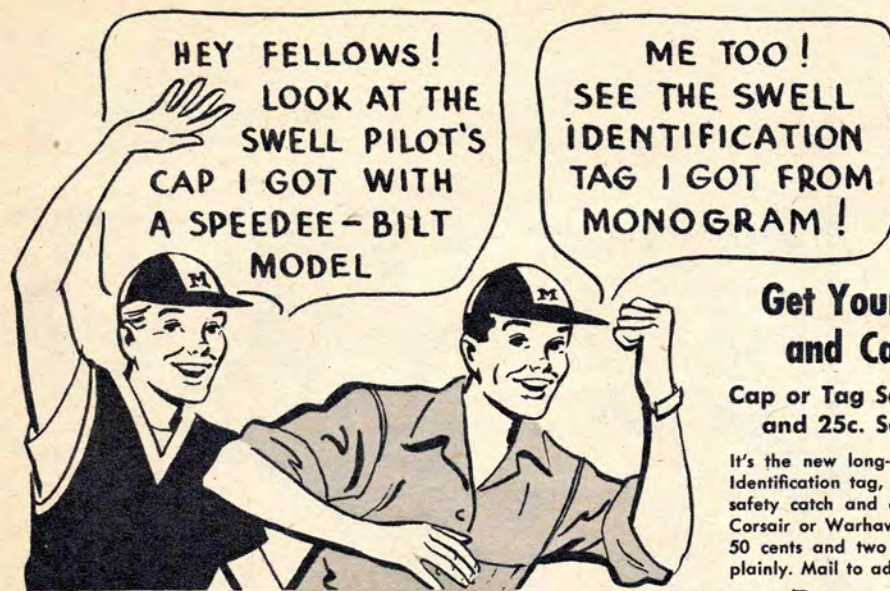
According to genial George Perryman, captain of the U. S. team, the top-place standings were as follows:

Place	Name	Country	Flights (in seconds)			
			1st	2nd	3rd	Total
1	Sune Stark	Sweden	226.2	232.5	246.5	705.2
2	H. Tubbs	England	252.7	236.9	186.6	676.2
3	S. Lustrati	Italy	226.0	229.1	209.1	664.2
4	J. deJong	Holland	258.1	206.0	189.8	653.9
5	A. Hofmeister	U. S. A.	201.0	223.6	204.8	629.4
6	C. R. deVries	Holland	194.8	170.3	256.5	621.6
7	M. Andrade	U. S. A.	226.0	180.5	208.3	614.8
8	P. Deschepper	Belgium	202.2	243.4	164.0	609.6
9	F. Holland	England	221.2	190.0	187.4	598.6
10	F. Cassola	Italy	172.0	236.0	190.2	598.2

The three rounds of the meet were flown at different times. On two successive evenings rounds were run off from 8 to 11 p.m. The last evening flying was followed by the final session at 3 a.m. For the most part it was windy with frequent wind shifts with entries being blown toward and over a hill. Fast-climbing models were at a disadvantage. Visibility was reported poor for the most part and downdrafts over the surrounding ridges did not contribute to duration.

Computed on a basis of total duration in seconds racked up by each team member, the British lads made the best showing. Total team times were as follows:

(Continued on page 56)



Get Your Pilot's Tag and Cap—Fellows!

Cap or Tag Sent for One Speedee-Bilt Box End and 25c. Send Two Box Ends and 50c for Both.

It's the new long-peak pilot's cap that smart fellows are wearing. Identification tag, engraved with your name, is airplane metal, with safety catch and chain to fit the wrist. Send end from Sabre Jet, Corsair or Warhawk box and 25 cents in coin for your choice. Send 50 cents and two box ends if you want both cap and tag. Write plainly. Mail to address below.



MONOGRAM Sensational • Exciting • New **SPEEDEE-BILT** flying models

The Finest Models Monogram Has Ever Produced—With Many More Sensational Features—and More for Your Money Than Any Other Kit.

ONLY 85 CENTS

How About it Fellows?

Now . . . the models you have always wanted. Compare these kits with any others and you will see why Speedee-Bilt gives you more value—more fun.

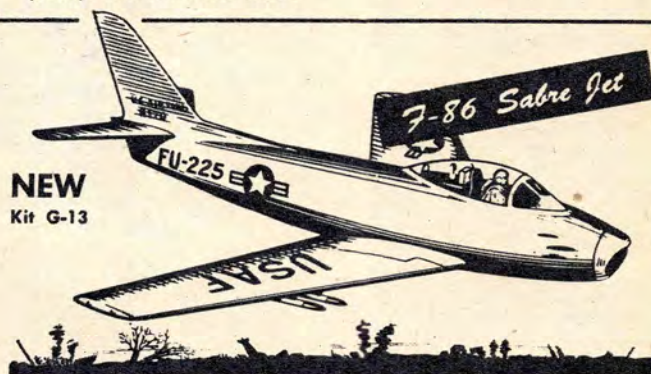
We told you last month how thrilled we were with our three new SPEEDEE-BILT MODELS—the models so many of you asked for. We know you are thrilled with them too, fellows, and that never before have you seen such fine kits and such big values.

And when you get to building them—Oh Boy! Such fun! Such realism! The three and four-bladed plastic props and other plastic parts added to the other outstanding SPEEDEE-BILT features, make building so easy and make you so proud of your finished models.

Build all of the new models. Get a SPEEDEE-BILT long peak pilot's cap and the identification tag too. They add to the fun when you fly your models.

If no dealer in your neighborhood order from address below.

Send 25c additional for shipment from nearby dealers stock.



NEW
Kit G-13

Swept-Back Wings • Deadly Fire Power

All These Parts in This Kit—Plastic Cowling—Plastic Pilot—Plastic Rockets (4)—Plastic Exhaust—Famous Monofoil Wing (Right and Left)—Prefabricated Fuselage and Tail Parts, in

Full Color and Die Cut—Plastic Canopy (Detail Molded)—3-Color Decals—Rubber Wheels—Metal Landing Gear, (Specially Formed)—Detail Picture Plans and 9 other parts.



NEW
Kit G-14

Gull Wings Easy to Build • More Simplified Construction

Corsair Parts List—Four-Bladed Plastic Prop—Plastic Cannon—Plastic Pilot—Plastic Cowling—Prefabricated Fuselage and Tail Parts, in Full Color and Precision Die Cut—Monofoil Wings (Right, Left and Center Sec-

tions)—Three-Color Genuine Decals—Rubber Wheels—Landing Gear (Specially Formed)—Plastic Canopy (Detail Molded)—Rubber Loop—Detail Picture Plan and 11 other parts.



NEW
Kit G-15

The All-Time Favorite • Ferocious Tiger Mouth Decals

Build With These Parts—Three-Bladed Plastic Prop with Plastic Spinner—Plastic Pilot—Plastic Exhausts—Plastic Cowling—Prefabricated Fuselage and Tail Parts, in Full Color and Precision Die Cut—Monofoil Wing (Left

and Right)—Formed Plastic Canopy—Rubber Wheels—Complete Landing Gear—Three-Color Genuine Decals—Rubber Loop—Detail Picture Plans and 12 other parts.

MONOGRAM MODELS, INC • 225 N. RACINE AVE. • CHICAGO 7

(Continued from page 54)

lows (figure in parenthesis denotes the number of men on the team): England (6), 2,934.9; U. S. A. (6), 2,904.6; Italy (6), 2,637.5; Holland (5), 2,607.0; Belgium (4), 1,923.9; Sweden (4), 1,762.4; Australia (5), 1,338.2; Finland (6), 1,333.4; France (3), 1,027.9; Canada (3), 547.0; South Africa (2), 300.5.

The models from Australia, Canada and South Africa were flown by proxy modelers. One of the South African proxy flyers was from South Africa—and even more surprising was the fact that he'd hitchhiked to Finland from his native land. He started at Easter and just made it with a few days to spare. This ardent modeler would work a few days at each port of call to pay for lodging and passage when necessary.

Winner in 1949 and 1950, Aarne Ellila of Finland, ran into tough luck and placed 47th in a field of 51 entries. With England making the top team showing, many observers look for a change in Wakefield rules whereby a team will compete for the trophy instead of an individual. The English through their S.M.A.E. write the Wakefield rules.

According to all reports the Dutch flyers were the most relaxed contestants. The Americans had the most unusual designs. The Swedes indicated they'd run the contest off in 1952 pretty much as it has been handled in Finland—flights to be made during the long summer evenings.

By virtue of the fact that Pan American World Airways and the KLM airline put the American team members up overnight on several occasions, the U. S. representatives flew and lived mighty high and had a fine time.

Before the Americans departed from New York by a PanAm Clipper plane, William (Berkeley Bill) Effinger, Jr., tendered the team a luncheon in the NYC Wings Club. At that affair some interesting statistics were brought forth. On the average, American team members had been building models for almost 16½ years! Yet the average age was less than 30—27 years, 8 months to be exact. So it looks as if some really experienced men flew on that team for us. A remarkable fact was that none had ever qualified for a previous Wakefield team.

Here's a quick run-down on the 1951



J. B. Oberthier of Plainview, Texas, with his Sammy Mason PT. Has Anderson Spitfire 65, silk covered, Aero Gloss finish. Neat!



The six members of the U. S. Wakefield team. From left: Austin Hofmeister, Baltimore; Dave Kneeland, Hickman Mills, Mo.; George Perryman, West Point, Ga. (captain); Joseph Foster, San Jose, Cal.; Manuel Andrade, Oakland, Cal.; Joseph Elgin, Cleveland, O.; Mrs. Elgin.

team members: Joe Elgin, 31, of Cleveland, who placed 12th in the finals, is a lithographer and a free lance flyer not currently associated with any model club. Joe served with the 8th Air Force in England during the last war when he was a navigator on a B-17. Mrs. Elgin accompanied hubby on the trip and they set off on a tour of the British Isles after the Finland affair.

David Kneeland of Hickman Mills, Mo., is a member of the Winged Motors Club of Kansas City. He placed 39th in Finland. Dave is 27 and a draftsman-engineer for the Mid-West Research Institute. He was in Navy engineering during World War II and has been building models for 20 years. Dave is a keen exponent of a six-minute maximum flight time limit for all types of model flying. After six minutes, he contends, there is no element of skill remaining in a flight—only luck. Forget the thermal factor beyond 6 minutes and free more stop watches for other flyers, is his argument. As did all team members for their respective semi-final CD's, Kneeland had high praise for Jim Stewart of Grand Prairie, Tex., the one who conducted the qualifying round in which Dave captured a place on the team.

Austin Hofmeister, Baltimore, is 29 and served with the infantry during the last war. He's been building models for the past 18 years and operates as a free lance flyer. Austin, who placed highest of the American flyers, is in sales work.

Well known for his polyhedral stab designs is George Perryman of West Point, Ga. George is a draftsman for a concern which turns out textile machines. An ex-G.I., he served with the Air Force as crew chief on a B-29. Perryman flies as a member of the Valley Model Aero Club and has been active in modeling for the past 15 years. He placed 15th in the finals.

Joe Foster, Jr., San Jose, Calif., was the youngest member of the team at 24. He is a photographer by trade and was a cadet pilot with the Air Force. Joe has been making models for 14

years. He was 29th at Jami-Jarvi.

The remaining member of the '51 U. S. team was Manuel Andrade, Oakland. Like Joe, Manuel is a member of the Oakland Cloud Dusters and their double victory in making the team certainly must have set some of the Southern California Wakefield contenders back on their heels. Andrade is 29, has been flying modelplanes for the past 15 years, is currently an aircraft mechanic at the Alameda Naval Air Station. During the last war he served in the Air Force as a maintenance man with a night fighter group.

All the team members were loud in their praise of the hard efforts expended by the directors of the regional and qualifying American meets. One had the distinct feeling that their expressions of sincere appreciation would have been just as vehement even if they had not captured team trips. To Jim Walker, of course, goes the gratitude of every American enthusiast for making the participation of a full U. S. team "in person" possible. Jim, a manufacturer of millions of rubber-powered all-balsa stick-type flying models, has started countless thousands of youngsters on the modelplane building path. He made a significant contribution to the advancement of American modeling and international good-will with his gift of six round trips by air to Finland for the U. S. team.

A special bouquet is due Ed Lidgard, chairman of the AMA's Wakefield Committee, along with his associates, Russ Johnson of California and William Fletcher of N. Y. C.

How to Settle a Tie. Wakefielder George Perryman passed on some interesting advice to contest directors faced with the problem of settling a tie in a modelplane contest. Seems as if there were two rather beefy flyers who ended up in a dead heat in a Georgia free flight meet. Both had racked up equal times, duplicate prizes were just not available, they'd be darned if they'd toss a coin to decide who'd get the 1st place trophy.

(Continued on page 64)

AN OPEN LETTER TO HOBBY DEALERS

MOD-AD DEALERS ARE LOCATED IN:

ALA.
Birmingham
Enterprise
Faulkner
Fairhope
Florence
Jasper
Leed
Mobile
Montgomery
Selma

ARIZ.
Kingman
Phoenix

ARK.
Green Forest
Jacksonville
Pottsville

CALIF.
Anaheim
Avalon
Banning
Chico
Del Paso Heights
Hollister
Inglewood
Kerman
La Jolla
Marysville
North Sacramento
Sacramento
San Diego
San Francisco
San Ysidro
Santa Monica
Santa Monica Heights
Temple City
Westwood
Winters
Yuba City

COLO.
Boulder
Pueblo

CONN.
Ansonia
Hartford
New Britain
New Canaan
New Haven
New London
Rockville
Waterbury

D. C.
Washington

DEL.
Camden
Seaford

FLA.
Bradenton
Clearwater
Fort Myers
Jacksonville
Lake Worth
Miami
Plant City
Stuart
Tallahassee
West Palm Beach
Panama City

GA.
Alapaha
Albany
Atlanta
Eatonsville
Savannah
St. Simon Island
Valdosta

IDAHO
Aberdeen
Boise
Weiser

ILL.
Batavia
Carmi
Casly
Centralia
Chicago
Decatur
Eureka
Flora
Lenox
Libertyville
Lombard
Martinsville
Metropolis
Mt. Vernon
Newton
Richmond
Robinson
Supeor

IND.
Alexandria
Bloomington
Bremer
Brownsburg

MISS.
Carlin
Vicksburg
Woodville

MO.
Bonne Terre
Cape Girardeau
Grandview
Kennett
Lexington
Piedmont
Rolla
Salcixie
St. Louis

MONT.
Deer Lake
Missoula

N. C.
Aberdeen
Chapel Hill
Greenville
Lenoir
Lumberton

N. D.
Amidon
Devils Lake
Hendersonville
Larimore
Linden
McCluskey
Minot
New England
Valley City

NEBR.
Chadron

NEV.
Carson City

N. H.
Exeter
Laconia
Meredith
Newport
Portsmouth

N. J.
Bergenfield

Bogota
Camden
Carlstadt
Deal
Englishtown
Fair Lawn
Guttenburg
Haddonfield
Haskell
Hoboken
Jersey City
Kenilworth
Madison
Millville
Montvale
Mountain Lakes
Newark
Oaklyn
Paterson
Penns Grove

Perth Amboy
Railway
Redminister
Runnymede
Sewell
Union
Washington
West New York
Westwood

N. M.
Clovis
Hurley
Roswell

N. Y.
Albany
Baldwin
Bay Shore
Bethpage
Bronx

Braxville
Brooklyn
Centerreach
Chatham
Corona
Corland
Dunkirk
Elmira
Endwell
Far Rockaway
Farmingdale
Fulton
Gilbertville
Glen Cove
Glen Oak
Goshen
Gouverneur

Gowanda
Greenwood Lake
Hadley
Hancock
Hawlett
Hillsdale
Ithaca
Jackson Heights
Jamestown
Johnson City
Lancaster
Latham
Long Island City
Malverne
Mamaroneck
Masspet
Mechanicville
Middle Granville
Middletown
Monticello

S. D.
Aberdeen
Gettysburg
Huron
Vermilion

TENN.
Chattanooga
Dyersburg
Elizabethton
Jackson
Memphis
Murfreesboro
Oak Ridge

TEX.
Bonham
Fort Worth
Fredericksburg
Grand Prairie
Hearne
Kingsville

UTAH
Cedar City
Ephraim
Richfield
Salt Lake City

VT.
St. Albans

VA.
Christiansburg
Danville
Farmville
Fredericksburg
Harrisonburg
Luray
Newport News
Norfolk
Richlands
Roanoke
Tazewell
Waynesboro

WASH.
Everett
Richland

WISC.
Colfax
Fond du Lac
Menasha
Rhinelander
West Bend

WYO.
Thermopolis
Torrington

W. VA.
Alderson
Clarksburg
Glasgow
Huntington
Madison
Parsons
Ravenwood
Rowlesburg
St. Albans
Sutton
Waverly
Williamson

ALASKA
Fairbanks

ARABIA
Oranjestad

ARGENTINA
Buenos Aires

BELGIUM
Brussels

BERMUDA
Paget

CANADA
Barrie
Halifax
Lethbridge
Montreal
Trois Riviera
Vancouver

COLOMBIA
Medellin

DOMINICA
Trujillo

HAWAII
Hilo
Honolulu
Waikoloa

INDIA
Calcutta

ITALY
Milan

JAPAN
Tokyo

MEXICO
Cuernavaca
Mexico City

PERU
Cuzco

PORTO RICO
Hato Rey
Ponce
Rio Piedras
San Juan
Sancti Spiritus

SOUTHERN RHODESIA
Salisbury

SWEDEN
Stockholm

SWITZERLAND
Basle

VENEZUELA
Caracas

MOD-AD AGENCY, INC.

Wholesale Affiliate of America's Hobby Center
156 West 22nd St. New York 11, N. Y.

WE HAVE CUSTOMERS - IN EVERY STATE - ALL OVER THE WORLD

Hobby Dealers,
Everywhere

Dear Dealer:

You are in business to make money. You can make more money if you can serve your customers better.

Helping our dealers make more money is exactly what Mod-Ad Agency has been doing. THIS IS NOT JUST SALES TALK. We have become the country's fourth largest jobber in less than three years by helping our dealers (we now have almost 600) MAKE MORE MONEY.

Our growth is due to these simple truths:

1. We carry tremendous inventories...the products of over 150 manufacturers...over 10,000 items.
2. We ship everywhere in the world--and pay postage in the U.S.A. on mailable shipments.
3. We supply our dealers with complete retail catalogs and display materials at no charge. Our monthly News Letter (not just a listing of what's for sale--but an analysis of what to expect in better or poorer business, sales helps, etc., etc.) is worth many dollars to you.
4. Our dealers are supplied with many special bargains, which means more customers for them.
5. Our terms and discounts are exactly like any other jobber's WITH ONE IMPORTANT EXCEPTION:
"EVERYTHING YOU BUY FROM US MAY BE RETURNED WITHIN 60 DAYS FOR FULL REFUND OR CREDIT." This means you can't make buying mistakes, that you can try additional lines, that you can even stock every new item that appears, that you are protected against price decreases. NO BUM INVENTORIES WHEN YOU BUY FROM MOD-AD AGENCY.

If you want to be progressive and make more profits, fully guaranteed against stock losses, and really run your store AS A BUSINESS, join our family of Mod-Ad dealers.
It costs nothing to find out. Use the coupon below.

Yours for better business,

Arthur Winston

Mod-Ad Agency, Inc.

Your Profits Are Our Business

FILL IN AND MAIL NOW

MOD-AD AGENCY, INC. 156 West 22nd St. New York 11, N. Y.

I have been a hobby dealer for years. My present jobbers include:

Please send me sample retail catalog and full data on how MOD-AD can help me make more profits.

I am considering opening a ☐ hobby store ☐ hobby department.

Please send me full information. Name

Address

MO.
Bonne Terre
Cape Girardeau
Grandview
Kennett
Lexington
Piedmont
Rolla
Salcixie
St. Louis

MONT.
Deer Lake
Missoula

N. C.
Aberdeen
Chapel Hill
Greenville
Lenoir
Lumberton

NEBR.
Chadron

NEV.
Carson City

N. H.
Exeter
Laconia
Meredith
Newport
Portsmouth

N. J.
Bergenfield

Bogota
Camden
Carlstadt
Deal
Englishtown
Fair Lawn
Guttenburg
Haddonfield
Haskell
Hoboken
Jersey City
Kenilworth
Madison
Millville
Montvale
Mountain Lakes
Newark
Oaklyn
Paterson
Penns Grove

Perth Amboy
Railway
Redminister
Runnymede
Sewell
Union
Washington
West New York
Westwood

N. M.
Clovis
Hurley
Roswell

N. Y.
Albany
Baldwin
Bay Shore
Bethpage
Bronx

Braxville
Brooklyn
Centerreach
Chatham
Corona
Corland
Dunkirk
Elmira
Endwell
Far Rockaway
Farmingdale
Fulton
Gilbertville
Glen Cove
Glen Oak
Goshen
Gouverneur

Gowanda
Greenwood Lake
Hadley
Hancock
Hawlett
Hillsdale
Ithaca
Jackson Heights
Jamestown
Johnson City
Lancaster
Latham
Long Island City
Malverne
Mamaroneck
Masspet
Mechanicville
Middle Granville
Middletown
Monticello

S. D.
Aberdeen
Gettysburg
Huron
Vermilion

TENN.
Chattanooga
Dyersburg
Elizabethton
Jackson
Memphis
Murfreesboro
Oak Ridge

TEX.
Bonham
Fort Worth
Fredericksburg
Grand Prairie
Hearne
Kingsville

UTAH
Cedar City
Ephraim
Richfield
Salt Lake City

VT.
St. Albans

VA.
Christiansburg
Danville
Farmville
Fredericksburg
Harrisonburg
Luray
Newport News
Norfolk
Richlands
Roanoke
Tazewell
Waynesboro

WASH.
Everett
Richland

WISC.
Colfax
Fond du Lac
Menasha
Rhinelander
West Bend

WYO.
Thermopolis
Torrington

W. VA.
Alderson
Clarksburg
Glasgow
Huntington
Madison
Parsons
Ravenwood
Rowlesburg
St. Albans
Sutton
Waverly
Williamson

ALASKA
Fairbanks

ARABIA
Oranjestad

ARGENTINA
Buenos Aires

BELGIUM
Brussels

BERMUDA
Paget

CANADA
Barrie
Halifax
Lethbridge
Montreal
Trois Riviera
Vancouver

COLOMBIA
Medellin

DOMINICA
Trujillo

HAWAII
Hilo
Honolulu
Waikoloa

INDIA
Calcutta

ITALY
Milan

JAPAN
Tokyo

MEXICO
Cuernavaca
Mexico City

PERU
Cuzco

PORTO RICO
Hato Rey
Ponce
Rio Piedras
San Juan
Sancti Spiritus

SOUTHERN RHODESIA
Salisbury

SWEDEN
Stockholm

SWITZERLAND
Basle

VENEZUELA
Caracas

MOD-AD DEALERS ARE LOCATED IN:

Mt. Vernon
New Berlin
New Rochelle
New York City
Northport
Norwich
Onsida
Oneonta
Port Jefferson
Port Jervis
Poughkeepsie
Richfield Springs
Rochester
Rockaway Park
Salamanca
Saratoga Springs
Schenectady
Scotia
Staten Island
Syracuse
West Babylon
West Hempstead
White Plains
Yonkers

OHIO
Barberton
Bellefontaine
Bellevue
Blanchester
Celina
Chillicothe
Circleville
Conneaut
Defiance
Delphos
East Liverpool
Middletown
Nelsonville
New Lebanon
Niles
North Baltimore
Ravenna
Salem
Sandusky
Tolado
Warren

OKLA.
Ada
Alva
Cheney
Elk City
Enid
Erick
Idabel
Lawton
Oklahoma City
Pawnee
Sulphur
Waurika

ORE.
Milwaukie

PA.
Brookville
Coatesville
Greenville
Harrisburg
Jenkintown
Jermyn
Kingston
Lancaster
Lock Haven
New Kensington
North Carbon
Philadelphia
Port Carbon
Red Lion
Sayre
Selinsgrove
Shamokin
Shamokin Dam
State College
Union City
Warren
Williamstown

R. I.
Central Falls
Westerly
Woonsocket

S. C.
Orangeburg
Pageland
Rock Hill
Sumter

S. D.
Aberdeen
Gettysburg
Huron
Vermilion

TENN.
Chattanooga
Dyersburg
Elizabethton
Jackson
Memphis
Murfreesboro
Oak Ridge

TEX.
Bonham
Fort Worth
Fredericksburg
Grand Prairie
Hearne
Kingsville

UTAH
Cedar City
Ephraim
Richfield
Salt Lake City

VT.
St. Albans

VA.
Christiansburg
Danville
Farmville
Fredericksburg
Harrisonburg
Luray
Newport News
Norfolk
Richlands
Roanoke
Tazewell
Waynesboro

WASH.
Everett
Richland

WISC.
Colfax
Fond du Lac
Menasha
Rhinelander
West Bend

WYO.
Thermopolis
Torrington

W. VA.
Alderson
Clarksburg
Glasgow
Huntington
Madison
Parsons
Ravenwood
Rowlesburg
St. Albans
Sutton
Waverly
Williamson

ALASKA
Fairbanks

ARABIA
Oranjestad

ARGENTINA
Buenos Aires

BELGIUM
Brussels

BERMUDA
Paget

CANADA
Barrie
Halifax
Lethbridge
Montreal
Trois Riviera
Vancouver

COLOMBIA
Medellin

DOMINICA
Trujillo

HAWAII
Hilo
Honolulu
Waikoloa

INDIA
Calcutta

ITALY
Milan

JAPAN
Tokyo

MEXICO
Cuernavaca
Mexico City

PERU
Cuzco

PORTO RICO
Hato Rey
Ponce
Rio Piedras
San Juan
Sancti Spiritus

SOUTHERN RHODESIA
Salisbury

SWEDEN
Stockholm

SWITZERLAND
Basle

VENEZUELA
Caracas



Accept only
PERFECT
TANKS



LOWEST PRICE...
... HIGHEST QUALITY

They're light, they're clean, they're soldered inside and out. What's more they're good to the last drop of fuel. PERFECT Tanks are 100% hot fuel proof... made of metal.

Ask your model dealer for PERFECT Tanks TODAY. But don't accept an inferior substitute! Make sure it's PERFECT!

No.	Oz. Cap.	Dimensions H W L	Engine Size	Price
1	1 4	11/16" x 15/16" x 3/4"	up to .099	39c
2	3 8	11/16" x 15/16" x 1-1/4"	up to inc. .099	39c
3	3 4	11/16" x 15/16" x 2-1/4"	up to .19	49c
4	1 3	5/8" x 1-1/16" x 3/4"	up to inc. .19	39c
5	1 2	5/8" x 1-1/16" x 1-1/4"	up to .23	39c
6	3 4	5/8" x 1-1/16" x 2"	up to .29	49c
7	2 3	1" x 1-1/2" x 1-1/4"	up to .23	49c
8	1-1/4	1" x 1-1/2" x 2"	up to .35	49c
9	2	1" x 1-1/2" x 3"	up to .39	59c
10	2-1/3	1-1/8" x 2-1/4" x 2"	up to .51	59c
11	4	1-1/8" x 2-1/4" x 3-1/2"	up to .65	69c
12	2-1/2	1-1/4" x 1-5/8" x 2"	up to .51	59c
13	3-3/4	1-1/4" x 1-5/8" x 3"	up to .65	69c
14	5-1/4	1-1/4" x 1-5/8" x 4"	up to .65	69c

Buy-Word of Satisfaction

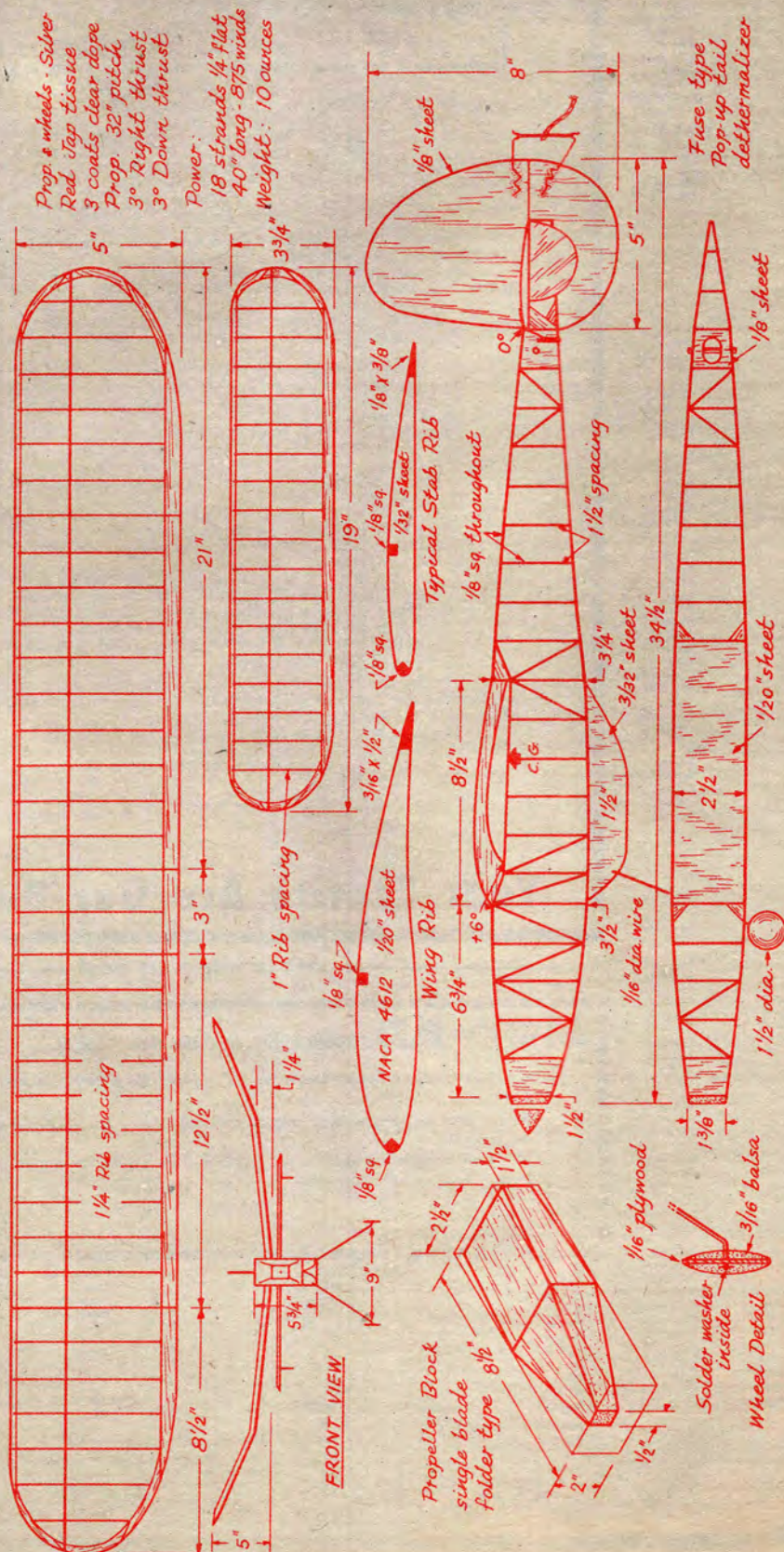
PERFECT
QUALITY MODEL ACCESSORIES

KRAMER BROTHERS
KRAMER BROTHERS
NATIONAL MODEL DISTRIB.
MAXWELL MODEL SUPPLY CO.

Baltimore 2, Md.
Newark 2, N. J.
Chicago 14, Ill.
Los Ang. 15, Cal.

RECORD REVIEW: Outdoor Cabin Model

In a world where pre-fabrication predominates and all-balsa is the byword, it's refreshing to encounter such a neatly constructed craft as the "Fast Climber" which was flown to a national Class D record by Paul Simon, 1951 National Champion. Paul says this model is from Bob Bienenstein's drafting board which qualifies it as outstanding. Both Simon and Bienenstein have reaped many contest honors.



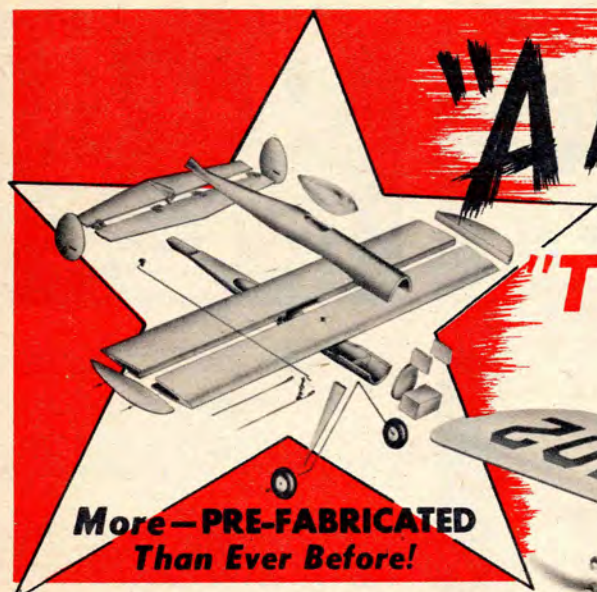
"A NEW STAR"

BY

ENTERPRISE

"THE SKY-LEADER"

Wingspan 18" For .045 to .09 Displacement Engines



**More—PRE-FABRICATED
Than Ever Before!**

FIRST—A COMPLETELY FINISHED FUSELAGE!

A COMPLETELY FINISHED WING...

A two-piece "New-Era" type "Wonder-Wing"... No ribs, edges or covering, yet it's hollow! Features the greatest strength-to-weight ratio ever achieved in model aircraft wing construction—available only in Enterprise models.

PLUS THESE OTHER FINISHED PARTS

- Ply Firewall and Mounts for lug or radial engines!
- Plastic Canopy, contoured to fit the fuselage!
- Read-formed Steel Landing Gear!
- Razor die-cut Tail Surfaces!
- Rubber Wheels, and many other Enterprise Extras!
- Exclusive Enterprise "Air-Brushed" Exploded Plans



AT YOUR DEALERS NOW...

Amazing Value at Only **\$2.50**

plus 20c by mail

The "SKY-LEADER" is the first completely carved $\frac{1}{2}$ "A" model ever produced. Its sheer beauty in flight will amaze all who build it. Proportioned for STUNT, SPORT and TEAM RACING, it combines realistic appearance with rugged flying ability... A combination that is destined to make MODEL HISTORY!

★
"KNOCK-OUT"

★
"BABY ERA"

★
"NEW ERA"

★
COMBAT ACES

★
"BABY ERA BIPE"

★
NIFTIES

ENTERPRISE MODEL AIRCRAFT & SUPPLY CO., INC.
5107 AVE. D, DEPT. AT-101 BROOKLYN 3, N. Y.

★ "CHAMPION 36"

★ "SHADOW"

★ "TOWLINE TERROR"

Plane Talk

(Continued from page 8)

remain, the cannon just begin again.

What can be done in future, not only for bloodless victories in war but for directions in civil defense or other emergencies, can only be guessed.

TICKETS TO LIFE

As for the leaflets, the Chinese have regarded them as safe-conduct passes and have surrendered, grinning and waving these colored prints with pictures and Chinese characters. Not only that, but some prisoners bring a whole set of tickets. If they get one showing medical treatment, another for food, and one for cigarettes, they believe they will get all these things—as they do.

As the result of the interrogation of plenty of prisoners, there is no doubt about the effectiveness of the method, which might work even better for a more literate foe. It may well be seen how Syke Air, bloodless and inexpensive, has paid in the capture of 60,000 or more. Cities also have been targets of this operation, to encourage sabotage and non-cooperation with the enemy.

To train Psychological Warfare Officers and Foreign Language Propaganda Officers, the Air Force has conducted a special school at Georgetown University in Washington. Subjects taught have included comparative cultures, foreign policy, sociology, and economic factors. Now a new Wing has been established at Mountain Home Air Force Base, in Idaho. Part of its mission is aerial resupply and communi-

cations, but the main job is Syke Air, "to reproduce and disseminate psychological warfare materials," as the official words go.

For the future, many more uses come to mind. Since the Reds jam the Voice of America broadcasts, and few own receivers anyhow, there is still the leaflet from the air for bloodless victories on a far greater scale. Though the paper balloons that the Japanese sent against us were mostly lost at sea, Drew Pearson has pointed out that the westerly winds from Europe could easily spread messages, from the free world behind the Iron Curtain.

In a shooting war, not only planes but missiles are conceivable for delivery of the good word for our side. Aviation, after its destructive interlude, may at last become the instrument of peace that its pioneers envisioned.

—KENDALL K. HOYT

Whizz Wagons

(Continued from page 46)

and a lock. Sandwich the bellcrank between the head of the bolt and a nut so that it will have smooth action without wobbling. Force the bolt through the hole and tighten the top nut until the washers are almost level with the wing surface. Coat brass sheet and lower nut and washer with cement to lock the assembly. The wing can now be cemented to the top shell.

The elevator horn is made from wire. It runs to the tip and is then bent back to obtain firm anchorage. Loop wire to hold operating wire, which can be made from .049 gauge. Cement hinges as shown. Then cement the stabilizer to

the lower shell, as shown on plan.

When carving the cowling, be careful not to break it in half because of the exhaust slots. Might be a good idea to cut slots to halfway point from top down. Then cement the top in place. With top in place, the slots can be completed. Cement cowling in place while the two shells are bolted together. If you are worried about scorching the wood by the hot motor, coat the interior with water glass.

Note the use of 1/16" plywood for the nose on the top shell to prevent balsa chipping. Do likewise on bottom if balsa shell is used. Notice the construction of the wire guides. Push "U" wire through wing and press into balsa until flush with surface. Bend loops and cement well. The Wasp engine needs an extension for the needle valve stem.

The model can now be assembled and finished. It is a good idea to coat the fuselage inside with several layers of clear dope to obtain hard surface. The strongest finish is still more coats of 50-50 dope-and-cement mixture. By applying this, a celluloid-like skin is obtained. This should be rubbed down very smooth. A final coat of fuel proof completes the model.

If color is desired, take the dope and mix in it enough talcum powder to obtain a thin paste. Coat the model and sand when dry. This will fill whatever cracks may still be present. Then apply several thin coats with regular finishing procedure. Be sure to let dope dry completely before adding more. It is best to use thin coats to preserve as much base toughness as possible. Pigment in the dope weakens it and it may also soften the cement-skin base if you tend to work too fast.

ATTENTION Control Line Flyers!

Fly the NEW FOX 59!

- LIGHTER WEIGHT
- QUICKER STARTING
- GREATER POWER
- SMOOTHER RUNNING
- PERFECTED CARBURATION



\$29⁹⁵ at your Hobby Shop

Experience for yourself the tremendous thrill of vastly superior motor performance!

FOX 59 performance will enable you to complete your pattern with the snap and precision that bring top points. With new confidence you will improvise new and more difficult maneuvers . . . secure in your knowledge that FOX will pull you through!

By the makers of the famous . . .

FOX 35 - Winner of ALL FIRSTS in 1950 National Stunt Event; winner of hundreds of stunt contests throughout the country this past year. **\$14.95**

FOX 29R - World's Record Team Race Holder . . . Outstanding Racing performance. **\$16.50**

FOX 29 - Finest in 29 Stunt and Free Flight performance. **\$14.95**

ARNOLD & FOX ENGINEERING CO.

7401 VARNA AVENUE, NORTH HOLLYWOOD, CALIFORNIA

Like mystery?

Then you'll love

THE

SHADOW

Sunday on MUTUAL

Q and A

QUESTIONS ON ALL PHASES OF AVIATION AND MODELING WITH ANSWERS SUPPLIED BY AIR TRAILS' BOARD OF EXPERTS

Tigercat Afloat . . . Did the Grumman twin-engine Tigercat ever go into service on carriers?

Randy MacIntosh, Bremerton, Wash.

• The F7F Tigercat was primarily used as a land-based Marine fighter, but it has operated successfully from aircraft carriers of the Essex class.

Specifications . . . Would you tell me the wingspan of Grumman Panther Navy jet fighter, the Republic Thunderjet, and the Vought F7U Cutlass? Also the fuselage length of the Lockheed P-80.

John W. Kalusa, Chicago, Ill.

• Wingspan of the Grumman Panther: 38 ft.; Republic Thunderjet: 37 ft.; Chance Vought F7U: 39 ft. Fuselage length of the Lockheed P-80 is 34 ft. 6 in.

Please tell me the wingspan, length, altitude and how many men in the crew of the B-17 Flying Fortress. Also the range and altitude of the Bell P-39 Airacobra.

Richard Moore, Chicago, Ill.

• The B-17 had a wingspan of 103 ft. 9 in., length of 74 ft. 9 in. Normal crew complement was nine men; service ceiling around 35,000 ft.

The Bell P-39 had a range of 1,100 mi. with belly tank at a speed of 178 mph, which was its economical cruising speed. Service ceiling was reported to be around 30,000 ft., which is rather doubtful since pilots who flew it reported having a hard time climbing to an altitude higher than 15,000 ft.

The Primary Glider Question . . . Would you please send address or information where plans for a primary training glider are obtained, one that has a 20 or 25 ft. wingspan and will accommodate one person.

Which is best, pod and boom or fuselage type of glider? We are two boys of 16 and would like to try our hand at such a thing. We have been building models for the past four years and find it very interesting. We belong to the local modelplane club here in town.

Fred Jones and Glenn Morris, Moose Jaw, Sask., Can.

• Sorry, no such plans are available in this country. The primary glider should have a wingspan of not less than 34 ft. As to pod and boom vs. fuselage type, a well-designed pod and boom glider will have slightly less drag, but the boom usually presents problems in connection with the strength of tail anchorage.

Difference in Ardens . . . I like to know what is the difference between Special Arden engine and the Standard Arden engine? It has been bothering me.

Guy Hoffmann, Lima, Peru

• Two Arden engines have been put on the market; one is fitted with a bronze bushing for the main bearing and the other has two ball bearings.

When Wings Warp . . . Not long ago I built a rubber-powered Hellcat. Now the wings are warped and have a much larger dihedral. The covering has lines in it like grain in wood. What causes this and what may I do to prevent it?

Fred Balchunas, Vancouver, B.C., Can.

• You can prevent such warpage on future models by adding a few drops of castor oil to your dope. Three drops per ounce of dope is about right, but try some out before applying it to your model. If it is sticky after drying, cut down the amount of oil.

There is probably nothing you can do to the Hellcat except recover it. Warps can sometimes be removed by holding the wing over a steaming teakettle and twisting opposite to the warp. Hold this away after removing from the steam, until the paper becomes dry and taut again.

(Continued on page 63)

TOP FLITE
MODELS INC

You 1951

NATIONALS WINNERS

Proved it Again

JULY 23-29, '51 at Dallas, Texas

You proved for the **FOURTH** consecutive year that most champions use Top Flites and Power Props! Everybody knows you did a lot of testing to get the most performance out of your models. In propellers, you want the most pull—and we at TOP FLITE appreciate the compliment when you select more **TOP FLITES** and **POWER PROPS** than all other makes combined!



Carl
Goldberg

FREE FLIGHT GAS

Cl. AA Junior
Don Tune
L.A., Calif.
Perf: 13:29, Torp .049
6/4 Power Prop

Cl. AA Open
Dick Everett
San Diego, Calif.
Perf: 22:05, Torp .049
6/3 Top Flite

Cl. AA Senior
Jack McComb
Columbia, Mo.
Perf: 15:07.6, Wasp .049
6/4 Top Flite

Cl. B Open
Ernie Shailor
Detroit, Mich.
Perf: 21:41.4, Forster 29
10/3 1/2 Top Flite

Cl. C Junior
Curtis Franke
San Antonio, Texas
Perf: 18:43, Torp 32
11/6 Top Flite

Class C Senior
Don Murray
West Point, Ga.
Perf: 22:00, Triumph 49
11/6 Top Flite

Cl. C Open
Bob Ottomano
Medford, Oregon
Perf: 28:05.4, Torp 32
10/6 Top Flite

Row Junior
Bill Lofland
Abilene, Texas
Perf: 4:11.8, Veco 29
9 1/2/6 Power Prop

Row Senior
Edward R. Mate
Chicago, Ill.
Perf: 11:27, OK Cub 09
7/4 Top Flite

U. S. NAVY

Radio Control Bombing
Open

Clifford Schaible
Roselle Pk., N. J.
99 1/2 pts., McCoy 19
9/6 Top Flite

Carrier Control Line
Open

Bob Lutker
Fort Worth, Texas
253 pts., Fox 35
10/6 Top Flite

PAA LOAD Class AB

Junior
Michael Cook
Glendale, Ohio
Perf: 3:36.6,
Ohlsson 29
11/4 Top Flite

Open
Herb Kothe
Grand Prairie, Texas
Perf: 15:19, Torp 29
11/4 Top Flite

Flying Scale
Senior
Juel Clevenger
Kansas City, Mo.
Atwood 49
10/8 Top Flite

Precision Acrobatic
Open
Lou J. Andrews
Norwood, Mass.
382 pts., Fox 35
10/6 Top Flite

Flying Scale
Open
Chief John K. Abbott
Corpus Christi, Texas
McCoy 49
10/6 Top Flite

Team Racing
Open
Bob Lutker
Fort Worth, Texas
454 pts., K & B 29
9/9 Power Prop

CONTROL LINE

Speed Cl. A
Junior
Tommy Davis
Atlanta, Ga.
110.56 MPH, McCoy 19
7/9 Power Prop

Precision Acrobatic
Junior
Harris Grimes
Atlanta, Ga.
324 pts., Veco 29
10/6 Top Flite

Flying Scale
Junior
Jimmy McRoskey
Iredel, Texas
KNB-32
9/6 Top Flite

Precision Acrobatic
Senior
Don Ferguson, Jr.
Newtonville, Mass.
389 1/2 pts., Fox 35
10/6 Top Flite

FELLAS! FLY THE PROPS OF CHAMPIONS!

UNIQUE ENGINEERING DELIVERS MORE PULL

Pick up a Top Flite or Power Prop and notice the rounded edges and thin trailing edges! Note the extra smooth finish and the balance. For better results try them and you'll agree with the Champions—it's the unique engineering hidden in the design that makes Top Flites and

Power Props deliver More Pull!

Whatever your choice—Free Flight, Stunt, Speed, Payload, Scale or Sport Flying... there's a Championship Prop of the Size and Pitch best suited to your Engine. Try them... You'll always Fly 'Em.

NO GUESSING WITH TOP FLITE PROP CHART.

Do you want to know what size and pitch of Prop to use with your Engine and Airplane? The Top Flite Prop chart tells you quick as a wink. Ask your dealer!



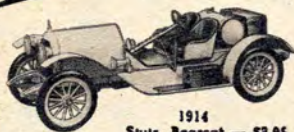
TOP FLITE Models Inc., 2635-45 S. Wabash Avenue, Chicago 16, Illinois

Now, You Too, Can Own A

STUTZ Bearcat!

Measures
10 1/2" in length
when completed

It's Easy! It's Fun!
It's the New Hobby
That Is Sweeping
the Country! Easy-
to-Build Collector's
Miniatured Re-
sique Auto Models
in 1/4" Scale!



1914
Stutz Bearcat — \$9.95

In a few leisure hours you can build this fabulous STUTZ Bearcat in miniature! Not only this nostalgic gem, but 14 other famous antique autos are yours to build and enjoy! So start today! If you have not built an "Old Timer" yet, you are missing a big thrill! Each one is exquisitely detailed. The prefabricated kit includes ready-shaped die-cast parts, cast wheels, lights, horns, radiators, etc. Easy to follow step-by-step instructions included. When complete, they're perfect for your den or library. Easily converted into lamps, etc. Nationally known: satisfaction guaranteed. At hobby, toy and department stores.



1910 Model "T"
Ford — \$2.50



1911 Maxwell — \$2.50

1909 Stanley Steamer	.....\$2.95
1904 Olds	.....\$1.95
1911 Buick	.....\$2.50
1903 "A" Ford	.....\$2.50
1909 "T" Ford	.....\$2.95
1903 Cadillac	.....\$2.50
1900 Packard	.....\$2.50
1903 Rambler	.....\$2.50
1902 Franklin	.....\$2.50
1910 Inter. Harvester	.....\$2.95
1913 Mercer Raceabout	.....\$3.95
1906 "Old 16" Loco.	.....\$3.95

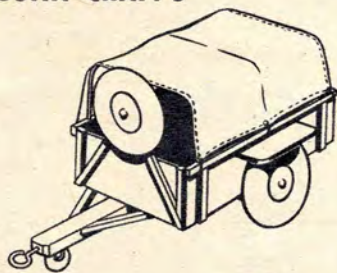
Write to us. Add 25c for postage, handling. No C. O. D.'s, please.

hudson miniatures OLD TIMERS

"Originators of Antique Autos in Miniature"
SCRANTON HOBBY CENTER
315 Adams Ave., Dept. 8, Scranton 10, Pa.

Ready Now!

AUSTIN-CRAFT'S



NEW

U. S. ARMY

JEEP TRAILER

Here's realism-plus . . . Here's authentic scale—1/2"=1' . . . Here's an auxiliary hauler to use with either famous A-C 1/4 Ton Jeep or A-C 2 1/2 Ton U.S. Army Truck! Pre-formed, precision-cut parts assemble in a few minutes . . . but you'll spend hours admiring it . . . and you'll be proud to show it off!

Here's features you'll go for!

- Twin plastic tail-lights!
- Plastic wheel with black simulated tires—including spare and smaller balance or tongue wheel that's movable!
- 3 Pre-formed ribs hold top covering!
- "O.D. Canvas" top covering! Cut to size.
- Easy-to-form wire for trailer hitch and other parts!

Add this easy-to-build Jeep Trailer to your shelf model Motorized Division!

complete kit 75¢

at dealer's everywhere

Austin-Craft
431 S. Victory Blvd., Burbank, Calif.
Enclosed find check (cash or Money Order) for:-----
() New U.S. Army Jeep Trailer—75¢
() A-C 2 1/2 Ton Truck—\$1.75
() A-C 1/4 Ton Army Jeep—\$1.00
Name-----
Address-----
City-----Zone-----State-----

Western R-C



"Certainly it flies," says "Skipper" Willson. The ship is a six-foot Scientific Mercury with a K&B Torpedo .29 controlled by Citizen's Band rcvr. Built by Colby Evett; red and yellow.

Leading the country in R-C work
are the West Coast modelers who
fly their craft the year 'round.

Inglewood, Calif.'s J. A. Acker was on hand with camera recently when some of the noted Western radio controllers flew their models. Most of these R-C enthusiasts are ex-free flighters who have found control from the ground the answer to their retrieving problems. More all-radio clubs are in West than elsewhere.



Dick Schumacher launches an R-C model which is operated on 27 mc band opened to AMA for test purposes. A Ruddervator is used for control and Cub .074 pulls ship nicely. Roy Mayes spectates.



Bill (W6JX) Butler's models range from Rockwood controlled (tuned reed) Ruddervator jobs are original.

Car Gas for Glow Plugs? . . . I have heard that model airplane engines could be run on white gas actually made for cars. Would this be advisable for a McCoy .098 and a Spitzzy .045? Would a lubricant need be added?

Barry Hallem, Carteret, N. J.

• Prior to 1947 all model airplane engines ran on gasoline and oil. This required a spark coil and batteries, similar to those used on automobiles to explode the mixture. Glow plug engines have been introduced to eliminate the complication and extra weight of spark ignition systems. A small engine such as your McCoy .098 and Spitzzy .045 do not have enough power to pull the extra weight of batteries and spark coil. Also, they are not fitted with points or a timer assembly. In spite of the extra cost of the fuel, glow plug operation is more satisfactory.

Wheels for a Wildcat . . . I am building a Grumman F7F Wildcat and can't find wheels to fit it. Could you please tell me where I can get two wheels 3" in diam. and one wheel 2" in diam.? It is preferred that they look alike, of course. Also, tell me where I can get two 3-bladed propellers to fit two O&R 23s.

Robert Lee Baker, Seymour, Ind.

• Mail order suppliers such as Berkeley, Jasco, Veco, Crescent could probably supply you with 2" and 3" dia. wheels. See ads in Air Trails. X-Cell Speed are 3-bladed props, now out of manufacture. You may find odd items in some hobby shops.

Large Tank for a Spitzzy . . . Is there any danger in putting an excess tank on a Spitzzy (.045) without burning it up? It will run about 1 min. on its interval tank and I'd like for it to run a little longer. Would it burn out or shorten the life of the motor?

Henley McElveen, Lake City, S. C.

• Many modelers use large tanks on your type of .045 engines. Flights up to five minutes can be made without any damage to the engine. The increased running time naturally wears the engine more than a short flight, but the total number of hours of useful flight time is not changed to any great extent. With a five-minute tank you should be able to get six months or more use from your Spitzzy engine.

License-Free Band . . . I understand that a license-free band has just been opened up on 465 mc. Is this true? Does operating a transmitter on this band require a factory-made transmitter?

Could you advise me as to where I could obtain plans for equipment that would operate on any one of the license-free bands?

Dave Hunt, Chagrin Falls, Ohio

• The only "license-free band" in this country is 465 mc. The transmitter has to be registered on a form sent to FCC, but there is no charge and no examination.

No plans have been published for such equipment, since it is illegal to build and operate your own. You can, of course, make your own receivers for the Citizens Band. There is only one make of transmitter (MacNabb) approved for use on 465 mc.

One Engine Only . . . I would like to build a P-38 but use only one engine (O&R 23) and I would like to have information on which side to put the engine, right or left. Have heard many arguments to both sides and would like to know the facts.

William Reynolds, Farnfeld, Mo.

• Flying a twin-engined model on one engine can be tricky if the model is not balanced properly or if the engine is not powerful enough for the size and weight of the model. However, twin-engined models can and have been flown this way.

If you do build such a ship, mount your engine on the side of the model toward inside of the circle. The drag of the other nacelle will then be acting outside of the thrust line and will cause the model to tend to turn outward, making for good control conditions.

If you use two engines (glow plug) always make the tank for the outside engine slightly smaller. In this way you can assure yourself of the outside engine cutting first, allowing the model good control while landing.

Some builders prefer to rig cut-offs for both engines similar to those used for team racing that will cut both engines together. If ignition is used a third line or relay can close a switch on both engine circuits so that they close together.

If you plan to build a P-38 model using an O&R 23 for power, we would advise that about 36" span would be about tops. Weight would have to be kept to between 1½ lb. and 2 lb. to give good performance with that amount of power.

8 New Stars On The Cleveland Pennant!



"SIMPLEX" KITS \$1 ea.

Just Out!

ANNOUNCING ANOTHER IMPORTANT CLEVELAND "FIRST" — THREE SWELL "SIMPLEX" FLYING JETS

They're Cleveland's brand new, grand new kit line. Only \$1 each yet look what you get!—Three fresh authentic C-D scale designs with all-diecut interlocking parts, an automatic bulkhead lineup in a strong, light keel, plus tapered, shaped and notched wing

edges, three-color decals, the best tissue, beautifully moulded canopies, pre-bent landing gear wire, a lightning bulkhead notcher, and many other features that make for smooth, fast assembly! Remember the name "Simplex" and get yours today!



"QUICKY" SETS BUILD FASTER, LOOK MORE REAL, AND FLY BETTER THAN ANY SIMILAR MODELS!

No cutting, no covering, no painting! — Just assemble and fly! Believe it or not, it can be done in just 18½ minutes! The parts are colorfully decorated in realistic detail just as they come. A one-piece completely finished, 18" wing, and a big, indestructible plastic prop, plus the lightness and ruggedness that result from their ultra-simplicity all go to make them tops. They are engineered to fly several hundred feet! Buy 'em all, build 'em all, and fly 'em tonight — you'll have the time of your life!



1" SCALE "JGP" KITS \$6 95

BOEING P-26A \$5 95

GREAT LAKES TRAINER \$5 95

BUILD THESE, AND BE PROUD OF THEM!

- Almost one sq. ft. of decals in P-26A!
- Shaped, notched leading edges
- Tapered, notched trailing edges
- Preformed wire
- EVERYTHING diecut!
- Giant cowl turning (P-26-A)
- Preshaped wing struts
- Easy-interlocking bulkheads and keel construction (or notched sheet sides)
- Routed-out wheel shoes
- Brilliant, colored "Skysail" gas model tissue
- Tails are diecut sheet
- Handy Bulkhead notcher in ea. kit
- Stunt and sport rib

CLEVELAND MODEL & SUPPLY CO.

4507K2 Lorain Ave.,

Cleveland 2, Ohio U. S. A.

Avoid Errors! Read Instructions Before Ordering



COMET DOPE
True Colors
Unusual Covering
Capacity
10¢

COMET CEMENT
Regular
Extra Fast Drying
Cement for Plastics
10¢

COMING RIGHT

25¢

THE "F" LINE

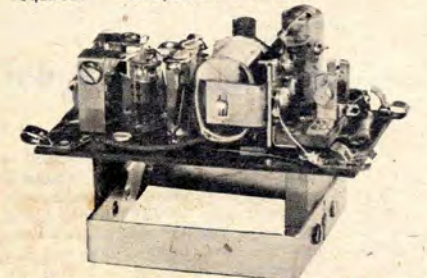
13 popular models!
Every part completely
pre-fab! Easy to build
—great flyers!

F4—STINSON VOYAGER
F13—THUNDERJET
F11—MUSTANG (F51)
F1—PIPER CUB
F6—FOKKER D VIII
F2—TAYLORCRAFT

COMET MODEL HOBBYCRAFT, INC.



Citizen Ship
RADIO CONTROL
On The Citizen's Band
The Only LICENSE FREE*
Radio Control
FACTORY ADJUSTED for permanent, trouble free performance.
READY TO OPERATE—No technical knowledge required. Escapement available.



TRANSMITTER completely self contained; price less batteries..... \$39.75
RECEIVER factory tuned precision unit, built in antenna; less batteries..... \$39.75
*No operator's or amateur license or examination required.
Station license application packed with transmitter; just mail to nearest FCC office.
See your dealer first . . . or write

VERNON C. MacNABB CO.
909 Westfield Blvd., Indianapolis 20, Ind.

Dope Can

(Continued from page 56)

Finally, much to the relief of the CD, one of the tie-ers came up with the solution. They'd run a foot race, by golly, and the fastest man would be declared free flight champ of that contest. So a 100-yard course was marked off, the hefty modelers lined up on the starting line, somebody blew a whistle and off went the flyers lumbering down the course. Both made it eventually, both were satisfied with the method of breaking the tie. Says George, "Best way of settling a ticklish situation I ever saw."

Chicago Land Modeling. The Chicago Tribune has announced the formation of a modelplane flying and building department which will be dedicated to fostering and supporting modelplane flyers (quoting from the Trib) with the intention of re-establishing Chicago as the national center for the activity. The Tribune expects to assist modelplane clubs in conducting flying meets, in obtaining supervised flying grounds and in getting novice flyers interested.

This is good news indeed for the modelers in the 5-state area served by the largest of the Chicago newspapers. The Tribune swings a lot of weight in and around Chicago and should be able to do much in the way of securing model flying fields. Clubs in the area who wish to participate in Tribune-sponsored activities are requested to contact Arnold Waldersen of the Suburban Fliers, 7405 W. Madison St., Chicago.

In announcing its entrance into the modelplane field, the paper stated, the Tribune's revived interest in model flying stems from the value in aviation technical training which automatically is accumulated by participants—whatever their ages—and from the funneling of youth interest in particular to a fas-

cinating and healthful sport which has overtones of national defense. Air Force, Navy and American Legion support for model flying throughout the country, as well as in Chicago, has indicated the latter phases of the program.

"Initially the Tribune is planning no big flying competition. Instead the paper will attempt to assist in formation of many new clubs and building up existing clubs in this area. The intent is to help provide sponsoring adult organizations for the flyers and aid in setting up workshops where inexperienced boys and girls can get advice, assistance and leadership in what is a challenging and complex science.

"The Tribune expects to help the model builders association to run a series of inter-club competitions this fall. If interest in the sport is generated as anticipated the same association will progress to inter-sectional and eventually into area competitions."

Ladies Day. Chicago and New York recently recognized the important place the gals play in the modeling picture. The New York Herald-Tribune devoted more than half a column to "Women Find Model Planes Pleasant Hobby—Bronx Housewife Tells of Crowds That Turn Out to See Neighborhood Flight." This was an interview with Mrs. Blanche Hasselbach, wife of the well-known Hell-Razor Art, big chief of Consolidated Models and director of control line events for this year's Mirror Model Flying Fair.

Betty Walker's for-the-girls-only column in the Chicago Sun-Times had an interesting interview with 20-year-old Theresa Grish, who was described as a 5-foot, 2-inch, 112-pound test pilot in her brothers' modelplane factory at St. John, Ind. Contestants at recent National and Plymouth International meets need no introduction to the very pretty Theresa. She confided to Miss Walker that she took up modelplane flying three years ago when her brothers, who are

UP!

COMET'S



25¢ • 50¢ • \$1.00

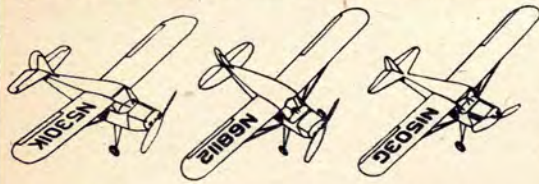
STRUCT-O-SPEED E-Z-to-Build Flying Models

MOST COMPLETE 50¢ KIT ON MARKET!

50¢

THE "K" LINE

3 models at dealers—more coming! Plastic cowling and prop, balsa, Holl-O-Wing! Completely pre-fab, with die-cut, color-printed balsa sheets.



K1—AERONCA

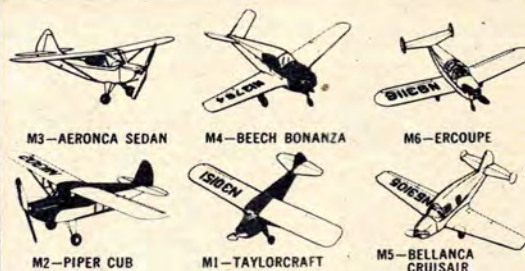
K2—PIPER CUB

K3—TAYLORCRAFT

\$1.00

THE "M" LINE

6 rubber-powered models; suitable for 1/2A engines. Plastic parts, shock-absorbing landing gear, shaped wing!



M3—AERONCA SEDAN

M4—BEECH BONANZA

M6—ERCOUPE

M2—PIPER CUB

M1—TAYLORCRAFT

M5—BELLANCA CRUISAIR

129 W. 29th ST., CHICAGO 16, ILL.

in the model prop making business, decided they were too old to continue participating in model contests.

A striking blonde, Miss Grish not only can handle a speed model with the best of 'em, but is capable of running every machine in her brothers' manufacturing plant.

Western Open. The 6th All-American Open meet will be held Oct. 13 and 14 at the Los Angeles International Airport under the sponsorship of the L.A. Junior Chamber of Commerce. This year's meet is expected to be largest of its kind on the Coast, according to Chairman Bill Gimbell. It will be held in conjunction with the annual Air Transportation Day celebration at the airport.

Competition will include indoor rubber, stick and cabin combined; indoor hand-launched gliders; all classes of speed control line combined; jet U-control; control line aerobatics, all classes combined; outdoor hand-launched gliders; outdoor towline gliders; all classes of free flight combined into one event; outdoor rubber, stick and cabin combined.

Entry blanks and rules from the L.A.J.C. of C., 1151 S. Broadway, L.A., 15.

Beaumont Reporting. The Sabine Area Gas Model Aeroplane Club (2170 Pecos, Beaumont, Texas) is a very active group. "In fact," says president E. D. Patterson, "we believe it to be the largest active club in the Southwest." And little wonder—the organization has more than 100 members with 85 active all the time. Sponsored by the Exchange Club of Beaumont, the modelers are fortunate in having one of the finest flying fields in their part of the country. The city has recently completed a new 60-acre Central Park which is available to anyone interested in model aviation. Three 150-foot flying circles, each having a 10-foot concreted pivot circle with a re-

movable pylon post, are a permanent part of the park. The circles are lighted for night flying. Now that's what we really call living, brother!

Model Firms at Work. During any defense or war periods the concerns manufacturing modelplane materials always make a significant contribution. But we seldom learn much about what they do until it's all over. So it's good to hear that one company, Henry Engineering Co., manufacturers of Veco products, announces what's cooking. Henry has just completed a series of scale models of the famous Douglas Globemaster load-lifting giants. Contracted by Douglas Aircraft Co., for use in loading studies and in instructing on transportation of military equipment in war colleges, the precise scale models feature transparent side and nose pieces, hinge mounted, so that scale model equipment may be loaded aboard the ship.

This, the first of a series of technical projects under way in the defense program, is a natural outgrowth of scale and prototype flight model manufacturing for the model and hobby field. Henry continues to produce prefabricated kits and a number of accessories for the modelplane industry.

Comments and Stuff. Lawrence H. Conover of the Illinois Iowa Aeronautical Association (Iowa City, Iowa, branch): "Many members of the IIAA would like to see a paper-covered event replacing just one indoor event at the Nationals. They would give many modelers a start toward the art of microfilm."

Andrew E. Emery, Mexico City, Mexico: "I don't know if we'll ever get under way on it, but another ex-G.I. down here and myself have been making plans to fly a model non-stop from Mexico City to the U. S. border. Maybe it's just a pipe dream at the moment, but we have great hopes. Probably use

(Continued on page 69)

Today's best procedures in
AIRCRAFT OVERHAUL • REPAIR
• INSPECTION • MAINTENANCE



A 3-
Volume
Course
in

BASIC AIRCRAFT MECHANICS

By the Technical Development Staff of the
NORTHROP AERONAUTICAL INSTITUTE

Charles Edward Chapel, Chief Editor
Over 2000 illustrations, 1247 pages, Scores of trouble-shooting charts, and work procedures

LOW PRICE—EASY TERMS

HERE'S a sound home-study course that is essential equipment for anyone who wants to qualify for big-pay jobs in the field of aircraft mechanics. Here are both theory and practice... the best methods and techniques covering the operation, inspection, maintenance, repair, and overhaul of all major aircraft engines and parts. It explains the basic principles and practices of subjects ranging from theory of flight, to consideration of proper weight balance and loading factors. You'll find the information you want—methods, techniques, tips, shortcuts and suggestions—covering internal combustion engines—aircraft electrical systems—pressure and mechanical instruments—supercharging and induction systems—etc., presented in an easy-to-digest manner that ensures quick mastery of aircraft mechanics.

McGraw-Hill Book Co., Inc.
330 W. 42 St., N. Y. 18

Send me Northrop Aeronautical Institute's **BASIC AIRCRAFT MECHANICS**, 3 volumes, for 10 days' examination on approval. If the books prove satisfactory, I will remit \$3.00, plus few cents for delivery, in 10 days, and \$3.00 monthly until \$18.00 is paid. Otherwise I will return books postpaid.

NAME.....
ADDRESS.....
CITY.....ZONE.....STATE.....
COMPANY.....
POSITION.....
AT-10-51
This offer applies to U.S. only.

CURTISS P40F GAS MODEL

New Improved Model



48" Span. Free flight or U Control

Improved with new 2 1/2" alum. spinner and 3" Veco alum. disk semi-pneumatic rubber wheels. Planked type body, parts printed on balsa, and all \$9.00 parts. Set

REPUBLIC P47D GAS MODEL



35 1/2" span. 3/4" scale. Length 30 1/2". One-piece moulded, clear plexiglas cockpit enclosure. 2 1/2" scale alum. disk rubber wheels. Body planking full size plans. Uses B or C motor. \$5.95 Set

9' TAYLOR CRAFT GAS MODEL



9' foot Span. Can use Radio control. Set has 36 ready cut wing ribs, cut plywood body formers, 16" carved prop, tail wheel unit, 2 full size plans, printed balsa, silkspan, etc. Uses "C" type motor, single, twin, or 4 cyl. motor. Set without \$17.50 motor or wheels, postpaid. Extra pair of 4 1/2" airwheels, \$4.50

CURTISS HAWK F11C4



32 1/2" span. Length 22 3/4". 1" Scale. A real collector's item. Finely detailed. Set has air wheels, ready cut pants, turned balsa cowl unit, parts \$4.50 printed on balsa. Const. set.....

Stearman PT17 N. American B-25



Set has 2 1/4" celluloid motor, plastic prop, etc. 23" span. Const. set.....\$2.95

Grumman-F3F1



32" span: 1" scale. Const. Elf 1-3 h.p. 4 1/4" wide. set. Rubber driven...\$3.75 Price\$49.50

BOEING PT17 GAS



45" Span. Can use 5 cyl. M5 motor to scale or B or C type motor. U control. Set has scale rubber wheels and all spec. parts, ready cut wing \$9.95 ribs, tail wheel unit and wheel. Const. set..

Add 20c for postage. Catalog—10c coin

MINIATURE AIRCRAFT CORP.

83 Low Terrace, Staten Island 1, N. Y.

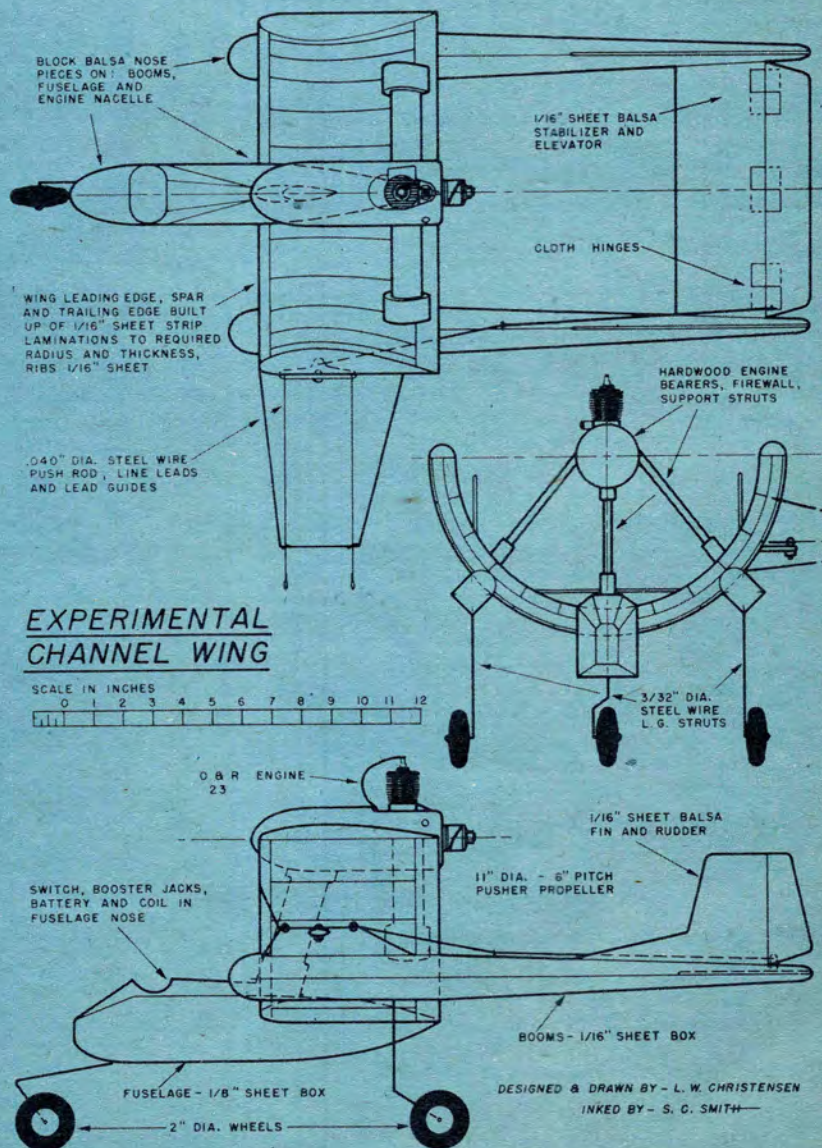
CHANNEL WING MODEL

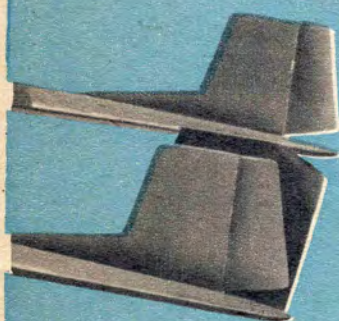
By L. W. CHRISTENSEN

Unique U-control job with semi-circular wing proves that there's something new under the sun

■ This model was designed after the Custer Channel Wing airplane. A single-engine design was decided on for two reasons: one was that getting two model engines to

run consistently and both at once was practically impossible, at least for me. Other reason was that I only had one engine at the time. So, after much sketching, the





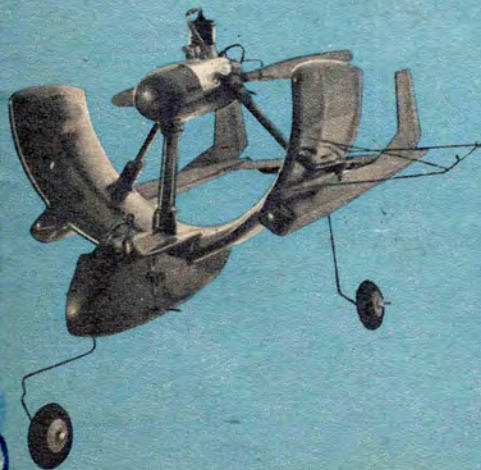
present design was built. Building time required about a month of spare time, and the model flew on first trial, much to everyone's surprise including my own.

The model was entered in a U-control contest, sponsored by Northrop Aeronautical Institute, in combined scale and original event, and won second place by making its official and test flight at the same time.

The ship is a little heavy for the engine used, but flies well and is very stable. If the engine is running rich during flight, the model will maintain altitude by flying in a nose-high attitude. With engine running, the model stalls out when it reaches about a 30 degree angle of attack. I have dragged the tail booms on the ground with the main wheels still in the air.

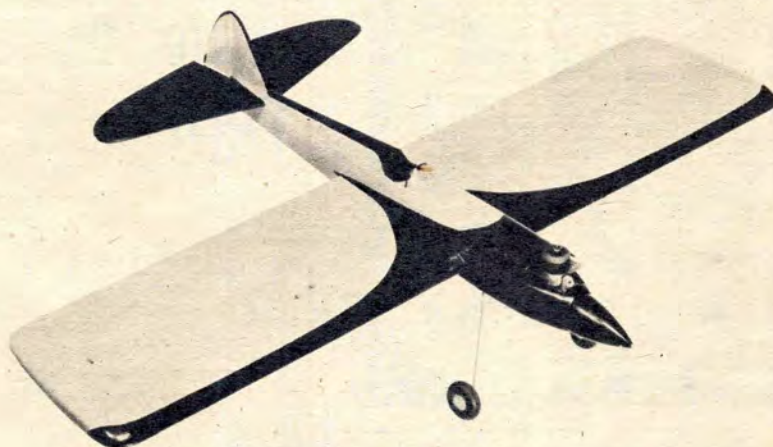
I consider the landing gear set-up very stable because it handles pretty rough circles, and I have flown the model down and landed it under full power, then given full down control, whereupon the model would run around-circle on nose wheel alone.

On first flight, the ship may be taxied as long as desired, then lifted off slowly.



Air Trails' Blue Ribbon Model F-B VAMPIRE

40" span, 9" chord, wing area, 360 sq. in. Ready-built fuselage, die cut ribs, shaped and formed parts. Formed landing gear. Class B-C **\$4.50**



RECOGNIZED AS ONE OF THE HOTTEST STUNT SHIPS FOR '51

**1ST IN DENVER-PLYMOUTH CONTEST
1ST IN GOODLAND, KANSAS CONTEST**

**High altitude designed for tip-top
contest performance coast-to-coast.**

Also order:

F-B Viking **\$5.75**
F-B Folly **\$1.75**
Baby Sky Box Stunt..... **\$2.95**

Piper Vagabond **\$3.95**
Sharpy-Stunt Plane **\$4.95**
P-T Trainer **\$1.99**

F-B MODEL AIRCRAFT — 3240 LARIMER — DENVER 5, COLO.

CANADA'S

**LARGEST AND MOST COMPLETE
HOBBY SUPPLIERS**

MODEL CRAFT CARRIES THE BEST

Monogram — Scientific — Jasco — Comet
Berkeley — Top Flite — Enterprise — Veco
Sterling — Testor — Guillow — Cleveland
Scranton Hobby — Ideal — De Bolt — A-J

*Dealer enquiries
solicited.*

MODEL CRAFT HOBBIES LTD.

66 WELLINGTON ST., WEST
TORONTO, ONTARIO, CANADA

POLK'S

Proudly
Presents

THE BEST BUY IN
RADIO CONTROL
AT NEW SPECIAL
INTRODUCTORY PRICE



COMPLETE,
READY TO OPERATE

\$39.95

You receive all this:

1: TRANSMITTER. 2: RECEIVER.
3: ESCAPEMENT.

Prices Separately:
1: \$28.50; 2: \$18.95;
3: \$5.95.

RECEIVER: Carefully matched components to obtain 100% performance from the new 9aa filled R. C. tube. Tuning by variable inductance eliminating difficult adjustments. Small volumetric size achieved by tubular case.



TRANSMITTER: 3A5 Twin triode tube giving greater radiation than any other commercial transmitter. Up to four watts input. Entirely self-contained including 8-ft. sectional Aerial. This transmitter will double the range of any known carrier operated receiver. Satisfactorily checked by G.P.O. for frequency stability and output. Within 0.5% limits. Batteries 235 Volt and 1.5 Volt.

ESCAPEMENT: 100% reliability due to robust and accurate construction of claw and rotor. Fitted with double winding and current saving device, a feature first developed by E. D. Weight only 3/4 oz. Uses 3 Pen Cells.

**CHAMPIONSHIP, CRASHPROOF
PERFORMANCE IN ALL PARTS
OF THE WORLD**

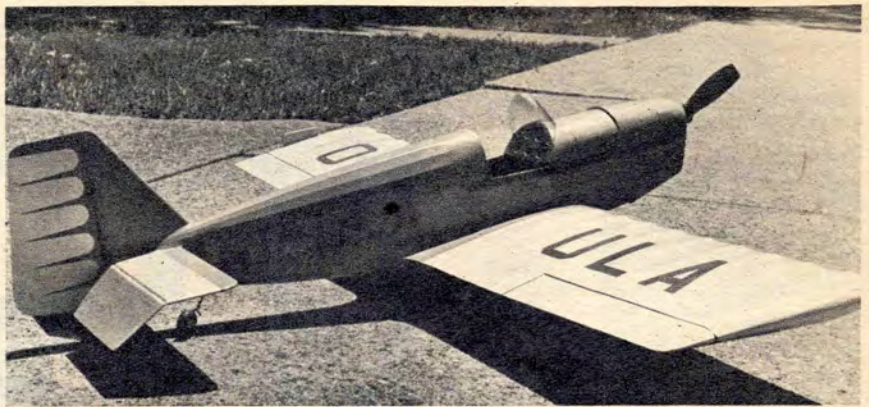
'E-D' Radio Control Unit has built a proud, UN-FAILING PERFORMANCE reputation everywhere! Precision and rugged construction are basic! All auxiliary components, double on-off switch, motor and four-pin battery plug and sockets, even solder is included! Receiver weighs only 1 1/4 ozs. Uses two 22 1/2 volt batteries, one 1 1/2 volt pen cell. Your best buy for contest, experiment or pleasure! (MAIL ORDERS: Send check or money order, add \$1 to cover packing and delivery).

DEALERS: Rush your order to Polk's at regular trade discounts. Also: Enjoy the convenience of single-shipment wholesale service for: Airplanes • Engines • Supplies • Accessories • Railroads • Ship Models • Art Supplies • Books • Constructo Finished-Parts Ship Models with Finished Displays.

POLK'S MODEL CRAFT HOBBIES Inc.

Dept. AT-10

314 Fifth Avenue, New York 1



From a 1949 issue of "AT" Ray Cohen, 20, of Chicago, built this Topsy Junior. Plans enlarged 1 1/2 to take Glo-Tarp. Wing area 415 sq. in.; "clank" tank permits full stunting.

Scale TRIO

As is evident from this fine collection of scale model planes, AT is always interested in photographic evidence of what its readers are doing. Regular payment of \$5 is made for photographs used providing they are submitted to Air Trails exclusively. Photos should be at least 4 x 5 inches in size and on glossy paper. Use cardboard stiffener when mailing, include all data.



Reader Mike Alaimo of Lawrence, Mass., turned out this neat Northrop, the Sky Chief built for Frank Hawks. Span is 32 in., silver with red trim. Fully detailed cockpit. Engine: O&R 23.



Highly detailed quarter inch to the foot scale model of Republic F-47 made by Charles S. Johnson, Jr., Albany, Ga. Model suspended by wire, shot against sky using G filter.

Simplikit MODELS

• • • • • FOR SPORT
• • • • • FOR STUNT

AN AIR TRAILS
BLUE RIBBON MODEL



PEE WEE PUP

FOR .020 TO .049 CU. IN. ENGINES



SUPER STUNT RUN

FOR .099 CU. IN. ENGINES

EASY TO BUILD! EASY TO FLY!
AT YOUR DEALERS NOW

Goy Products Company
MENOMINEE, MICHIGAN



CURTISS P-40F

a "SPITTIN' IMAGE" model by

MONARCH

• **MODEL of the YEAR** •

MONARCH'S new Curtiss P-40 has won nationwide acclaim as the finest scale gas model ever created. For the very perfection of brilliant design—for PRE-FABRICATION that is remarkable both for outstanding craftsmanship and the faithful adherence to every line and contour of the actual airplane—for ease and speed of assembly—for sturdiness and realistic performance in flight—this CONTROL LINE model is in a class by itself. See it at your dealer now—and you'll agree that this is "THE PERFECT SCALE MODEL".



for All .045 to .099 engines

\$345

by mail —
add 20c

WINGSPAN 20 inches



SCOT-FREE

A masterpiece of precision PRE-FABRICATION. Amazing performance and breathtaking glide. The most efficient free flight design ever! Smooth, trim lines — precision shaped WHOLE SECTIONS — not sticks and sheets. There has never been a model like it. For the flights of your life, go SCOT-FREE!

\$2.95

by mail
add 15c

for All .045 to .099 engines

WINGSPAN 34 inches

The perfect all-purpose CONTROL LINE biplane for half "A". A beautiful airplane — COMPLETELY PRE-FAB'D.



Wingspan - 18 in.

\$2.50

by mail, add 15c.

SWEET CHARIOT

MONARCH MODEL AIRCRAFT CO. Inc.

Brooklyn 33, N. Y.

Dope Can

(Continued from page 65)

an OK Twin in a (roughly) Burnelli-type job, 11 to 12 feet span. The other fellow's name is Marsdon Goard."

George Strader, Massena, N. Y.: "Maybe I am a die-hard free flight fan, or maybe I just don't want to give in to the newer craze—U-C. Not that I don't enjoy getting dizzy while thrilling the crowd at the local airport, because I do. I firmly think that U-C is here to stay, but to the younger modelers who have started out on power flights first with U-C models and as yet have not experienced the ultimate thrill of seeing a free flight taxi down the runway, lift its tail and without help from any one, say goodbye to earth for a beautifully balanced flight of one, two or more minutes—brother, they don't know what they're missing.

"I get carried away when it comes to this phase of model building (realistic free flight). But I have also had my spirits dampened, too, when the models forget to come back. Recently I have been experimenting using the small Half-A motors in planes designed to 'stick around' for awhile. This is one phase of the sport that has been sadly neglected. I know the well-known masters of free flight will want to burn me at the stake, but I personally can't see any sense in building a model that doesn't look like an airplane because the contraption was designed to fly to the moon—then they put a dethermalizer on it so it won't!"

Nameless Nat, Dunellen, N. J.: "After reading opinions and suggestions concerning the Navy Carrier event, I have reached some definite conclusions myself. How do they sound?"

"As I read the rules, the crux of the whole situation lies in the amount of

(Continued on page 80)

For Guaranteed All Around Finer Prop & Spinner Performance

SCAMPER

PLASTIC

PROP



- Aerodynamically engineered
- Static balance tested
- High tensile strength
- Low impact resistance
- Crankshaft insurance
- Made of finest plastic available

Once you try it you'll see why its popularity has been unprecedented.

Size 5 1/2-3
ONLY

25c

Size 6-4.....25c

Size 9-6.....40c

1/4" Brass Sleeve, 5c extra

Size 10-10.....65c

Size 11-8.....65c

SCAMPER

PLASTIC

SPINNER

- Absolutely wobbleproof
- Flywheel action maintained
- Fits all standard props
- 4 sizes: 1 5/8", 1 3/4", 2 1/4" diam.
- Colors: Red, Black, Yellow, Silver



EACH
ONLY

45c

If your dealer can't supply you, order direct, enclosing 15c for packing and postage.

DEALERS! JOBBERS! Write!

H. & P. PLASTIC PRODUCTS CO., GRAFTON, OHIO

You Can Build STRONG SLEEK MODELS



with PLASTIC WOOD

PLASTIC WOOD molds right into the lines of your model. Won't chip, crack or split! Handles like putty... hardens into wood. Can be carved, sawed and sanded. Ready to use. Takes dope or paint.

YOU'LL WANT Plastic Wood Solvent, too! Makes a perfect filler when mixed with Plastic Wood. Solvent removes Plastic Wood from tools and hands. Solvent is also used as a dope thinner!

FREE BOOKLET

"Slick New Tricks for Building Better Model Planes." Ask your local model dealer or write Boyle-Midway Inc., 22 E. 40th St., New York 16, N.Y.



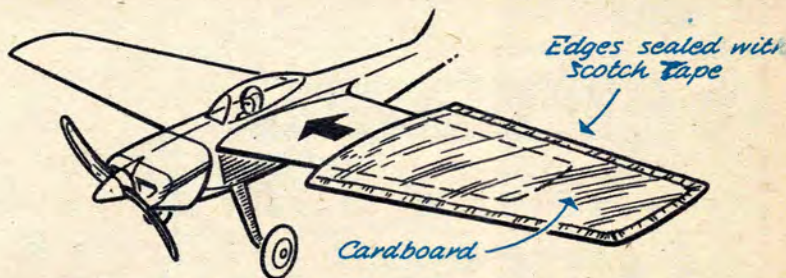
PLASTIC WOOD
A CELLULOSE FIBRE FILLER

Don't Miss —
FULL PHOTO STORY
ON NATIONAL MEET
IN NEXT ISSUE

The Viper AIR BOAT FOR 1/2A ENGINES

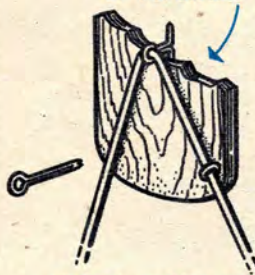


3 POINT SUSPENSION HULL, LICENSED UNDER
APL-VENTNOR U. S. LETTERS PATENTS #2,126,304
of August 9, 1938 and #2,481,063 of September 6, 1949.
COMPLETE KIT LESS ENGINE & SPINNER \$1.50
NORTH AMERICAN MODEL PROD'S.
9802 Warwick Road Hilton Village, Va.

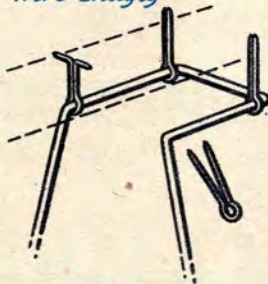


- Highly-finished or fragile paper-covered models can be protected during travelling by wing sleeves—
From Mike Adajian, New Britain, Ct.

Plywood former
or firewall

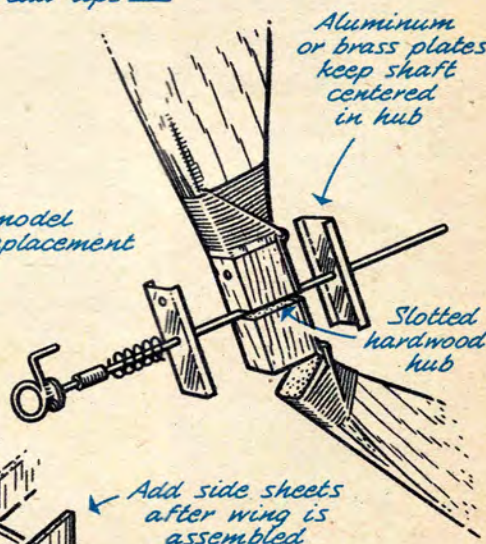


Select cotter pin
size to fit gear
wire snugly

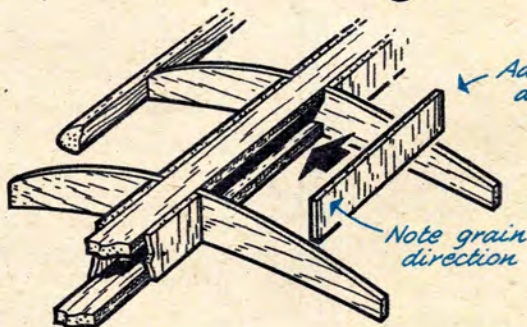


- Bill Halpain, Sulphur, Okla., finds ordinary cotter pins dependable for quick attachment of wire landing gear member. Mount to firewall or engine bearers, spread tips —

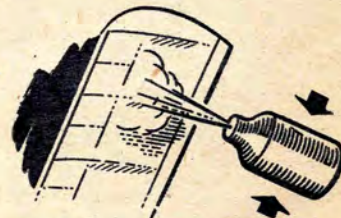
Aluminum
or brass plates
keep shaft
centered
in hub



- Removable rubber model propeller facilitates replacement and winding reports
Tom Mallerfis, Jr.,
Staten Island, N.Y.

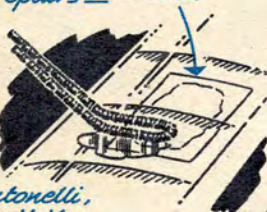


- Extra strength & lightness & simplified assembly are advantages of "box" wing spar for large rubber, gas models — Submitted by:
Yves Alloucherie,
Quebec, Canada



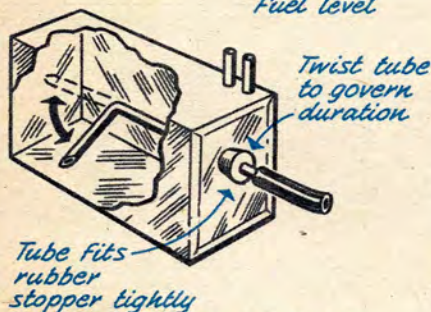
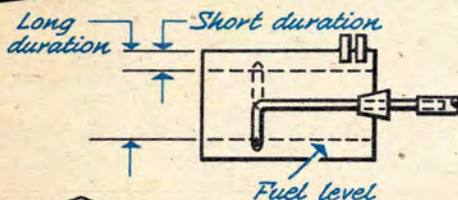
- Plastic deodorant bottle, washed & filled with water, makes handy tissue sprayer, suggests
Richard A. Wood,
Darien, Conn.

- Pipe cleaners, kept in kit box, serve as disposable dope "brushes" for quick field repairs — Patch

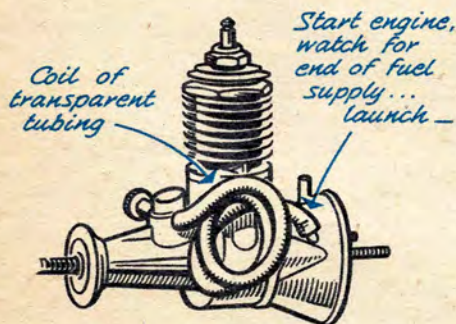


From D. D. Antonelli,
Brooklyn, N. Y.

Have you developed something new in construction, control, or flying that might interest other modelers? Send a rough sketch—we'll redraw it and pay \$5 for each one accepted. Sorry, we cannot acknowledge or send back submissions.



- Another neat tank idea for variable engine run — from Richard Johnson, Manchester, Conn.



- Simplified fuel-limiting system uses regular tank, variable-length transparent fuel line coil for visible check on remaining fuel — Used by Bob Bethel, Sacramento, Calif.

SPARKLING
PERFORMANCE!!

Kit C-7

with the
STUNT SCALE

RYAN S-T



\$5.95

By mail add 30c

Execute the stunt pattern with the sensational big 36" Ryan and your favorite B or C engine. Light but rugged construction. This twin cockpit job is the most beautiful thing in the air. Build it in a few evenings.

ALL STAR FEATURES

- *Die cut balsa and plywood parts
- *Shaped and notched Le. and Tr. Edges
- *Stunt airfoil
- *Brilliant engineering
- *Deep drawn and detailed **METAL COWLING**

BUY THE RYAN AND THESE MODELS AT YOUR DEALERS

By mail add 30c per kit

Monocoupe \$4.95 Pete ...\$5.95 Mr. Mulligan \$4.95 Waco\$5.95
Pol. Fighter \$5.95 S.E.5 ...\$5.95 Hawk\$1.50 Maverick ..\$1.00

SCALE POWER BOATS:

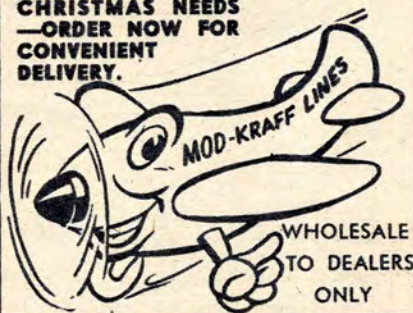
Higgins '17' \$4.95 Richardson '27' \$5.95

TUBING:

Sterline & Sterl-X

Sterling Models 1530-34 N. Hancock St. Philadelphia 22, Pa.

ANTICIPATE YOUR
CHRISTMAS NEEDS
—ORDER NOW FOR
CONVENIENT
DELIVERY.



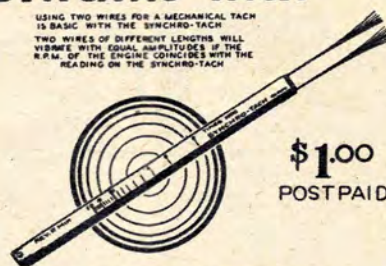
mod Kraff

840 Union St., New Orleans 12, La.

CLOSE
R.P.M. READING
WITH THE

**TWIN-REED
SYNCHRO-TACH**

USING TWO WIRES FOR A MECHANICAL TACH
IS BASIC WITH THE SYNCHRO-TACH
TWO WIRES OF DIFFERENT LENGTHS WILL
VIBRATE WITH EQUAL AMPLITUDES IF THE
R.P.M. OF THE ENGINE COINCIDES WITH THE
READING ON THE SYNCHRO-TACH



\$1.00
POST PAID

ENCLOSE \$1.00 WITH YOUR ADDRESS
AND WE SHIP THE SYNCHRO-TACH PREPAID.

HOFFMAN PRODUCTS
P.O. BOX 447 CHICAGO 90, ILL.



**DON'T MISS THE SENSATIONAL
NEW MODEL OF MODELS!**

SMARTY

1/2 A FREE FLIGHT

AT YOUR DEALERS NOW!

SOUTHLAND MODELS — P. O. BOX 2721 — GREENSBORO, N. C.





Large Tube 25¢

Aero Gloss is co-sponsoring
All American Contest

PACTRA CHEMICAL CO.

Makers of the Most Complete Line of Model Finishes

1213 No. Highland Ave., Los Angeles 38, Cal.

Foreign Inquiries: OVIPEX INC., 149 Broadway, New York 6, N. Y.

The newest member of the Aero Gloss family, C-77 is hot fuel proof...even when you use the "hottest of the hot"! Unaffected, C-77 holds parts in place...will not weaken and cause accidents in mid-air. Think what that means when you cement firewalls and motor mounts! You fly with confidence when you cement with C-77! Fast-drying—Strong—clear—easy-to-handle, generous tubes.

Aero Gloss
THE ONLY
TRUE Hot Fuel
Proof Dope

Not a synthetic...a real airplane dope...Aero Gloss Finishes That Mirror Perfection are favorites with that famous folks who win trophies. Try it today. Full choice of colors.



Jack Ehlan's "Scooter" team racer has won beauty event trophy at Santa Anita, Calif. Cowling splits along the side for free and easy removal. Six more being built by club-mates.



Coming Attraction

COMBAT FLYERS

PDQ is proud to introduce the first in a series of Military Type profile Airplane kits designed for Combat Flying.

The first of these sensational COMBAT FLYERS is

"MUSTANG" P-51

* * All Star Features * *

- Shaped and Notched leading and trailing edge
- Shaped Tail assembly
- Hardwood motor mounts
 - PDQ diecut ribs
 - Shaped fuselage
 - Formed landing gear
 - Complete Decals

pdq PRODUCTS COMPANY
TULIP & DAUPHIN STREETS
PHILADELPHIA 25, PA.

■ After a long, long drought U-control contests have sprung up all over the West. Olympia held the Washington Control Line Carnival which proved to be the second largest meet there during the past twelve months, even though it was advertised for a period of only three weeks before the contest. This meet, like so many others held out West, pointed more to novelty and variety than to speed and stunt.

One very interesting event was a U-control payload for powerplants under .36 cubic inch displacement. The removable payload had to be carried internally or in a securely attached pod. The objective was to carry the most weight for a minimum of one-half mile on at least sixty-foot lines. Sounds like a good deal; only one question: must the landing be safely made without nosing over?

Another was a cross-country refueling event where the objective was to log the most time in the air in a ten-minute period with a minimum of two dead stick landings. This limitation stops one from using a real big tank and staying in the air

all the time. In an event like this, the feverish activity in the pits during stops makes one break out in a sweat just watching. These stops also make the helper very important. This event as well as the 150 lap "rat races" are won on the ground; the ones who refuel and get started the fastest are usually the winners.

The W.A.M. held another of its meets at San Jose and found Chet Haworth Jr. of the Alameda Model Engineers setting a new endurance record. Chet flew an original design powered with a glow plug Drone for 1 hour, 28 minutes and 45 seconds. A total of 677 laps were flown at an average speed of 32.68 mph. The ship used up 1½ quarts of fuel for an average of 171.87 miles per gallon. Flying in this event seems a sure way of getting dizzy.

These fellows of the Western Association Modelers have a type of speed model not generally flown at most contests which they call the Proto-Speed. They allow no helmet, cowls, have a minimum span for each class and a generally realistic ship. These are in a sense similar to the team racers. As with all well intended rules, some of the fellows are trying to cut them by adding fins behind the helmet cowls, calling it a fairing and therefore a proto job. Also, some of the ships seem to have shrunk in size since built. According to Dale Root who puts in a good beef, wings on some of the Half-A jobs look a little undersize. The satisfying thing about all this, says Dale, is that the winners are all well within the rules. Tut, tut, fellows, naughty, naughty.

Another big gripe Dale has, is belittling the appearance points. Seems as though the boys get the idea that some judges get a kick out of knocking off as many points as possible. The idea of giving the best-looking



Douglas DC-3 by R. J. Plumley of Comptons, Calif. Powered by 2 Torp 29's. Has built-up planked wing, tail-hollowed fuse.

ship max points and judging the rest accordingly, has been lost in the shuffle. This method will work out best because there can never be any comparison between different contest points since they never have the same judges at any two meets.

Anaheim had a real meet, the first big one for the Southern California gang. There was top-notch flying. Scale models were super, the team



Two Fox 35's fly this Douglas A-20 built by James Devitt. Features shock gears, turret guns, movable ailerons and rudder.

event turned into a tough race with the La Mesa Airfoilers trying to get eight—count 'em—eight ships dog-fighting in the same circle. Due to lack of help, they managed to get only six ships in the air at once. Even so the near misses and streamer-cutting kept the crowd mighty well pleased. Every moment packed with excitement.

One very novel event eliciting a lot of interest (Continued on page 74)



Arland Wright's F-51 is fondly called "Lover's Lane." Uses inverted Torp 32. Ship is built-up and planked, weighs 3 1/4 lbs.

FREE

BONUS GIFT WITH EVERY COMBO

Beautiful nickel-plated 10-inch all-purpose metal saw and blade. Cuts any type of wood, plastic or fiber. Send for yours today. Free with every combo. Plus our big accessories kit.

YOUR CHOICE OF Model Plane and Motor listed below plus our big Accessories Kit. All kits completely prefabricated and shipped as advertised. Check the Berkeley, Scientific, Sterling, Master Models and Enterprise Co. ads for further info on kits in our combos. Check these terrific values and send your order in today as our supply is limited.

KNOCKOUT



SCIENTIFIC LITTLE SABRE



LITTLE MUSTANG



YOUR CHOICE OF ONE MOTOR

McCOY 049
CUB 074
GLO-MITE
SPITFIRE
TORP Jr.
SPITZY Sr.

YOUR CHOICE OF ONE MODEL KIT

BERKELEY'S Sr. Puddle Jump.
STERLING'S Maverick
BERKELEY'S Mini-Hogan 34
ENTERPRISE'S Knockout
ENTERPRISE'S Baby Era
ENTERPRISE'S Era BiPe
SCIENTIFIC'S Aerona Sedan
Cub 099 or Wasp.....\$8.75

MASTER MODEL'S S.E. 5
MASTER MODEL'S Wing Ding
MASTER MODEL'S Wing Dingus
SCIENTIFIC'S Cessna 170
SCIENTIFIC'S Cub Special
STINSON "150" Station Wagon
CONSOLIDATED'S Hell Razor

COMBO CONTAINS OVER 100 ITEMS—Model Kit, motor, metal stunt tank, bell crank, horn, hinges, cement, back on engine repairs, nuts, bolts, washers, brush, battery leads, push rod wire, plastic gas line, propeller, swivels, Glo-Plug, gasket, control handle, 100' control wire, motor test block, formed landing gear, all metal knife, correct wheels, ident. tags, lead-out wires, sandpaper, plans for automatic takeoff, plastic motor cover, speed indicator, Trim Film, masking tape, instructions on control flying, motor test chart, club membership, gas line, catalog, Etc., etc.

EXCLUSIVE DISTRIBUTOR!

Order direct from us as this offer is not available at any other shop or dealer. Do not confuse this offer with other Combo deals. WE ONLY SELL AND SHIP THESE COMBOS DIRECT TO YOU.

\$7.75

POSTPAID

DELUXE OUTFIT

• Royal Spitfire or McCoy 09
• And Model Kit (your choice)
• Acces. Kit
\$9.75 PP

COMPLETE COMBO

CLASS B-&-C

BIGGEST VALUES

THUNDERBOLT P-47



O & R 23



NEW ERA



YOUR CHOICE OF ONE MODEL KIT

BERKELEY'S Pitt's Special
ENTERPRISE'S New Era
BERKELEY'S BEARGAT

YOUR CHOICE OF ONE MOTOR

OHLSSON 19 or 23
McCOY 19

Add \$1 Extra to Combo Order When Requesting Following Kits:
Berkeley's Mustang • T-28 • Quest
Sterling Polish Fight. • S.E. 5 • Waco
New Ryan ST

Choice of Model Kit
Big Accessories Kit
O & R Deluxe
19 or 23

Choice of Model Kit
Big Accessories Kit
McCOY "29"

\$13

\$14

DELUXE OUTFIT
ACCESSORIES KIT
O & R 29-33
MODEL KIT (Your choice)
\$15

Your Choice Of MOTOR • MODEL KIT BIG ACCESSORIES KIT

\$12.50 PP

VISIT OUR RETAIL DEPT.

Just send us your order with remittance in full . . . or \$1 and we'll ship C.O.D.

MERCURY MODEL AIRPLANE CO.

920-A10 UTICA AVE.
BROOKLYN 3, N. Y.

SEND 5c FOR CATALOG and FREE "Motor Hints"

Free dealers write for new catalogue



complete line of model planes, boats, trains, race cars, crafts.

LEITZSEY model distributors
P. O. Box 5221-FP Columbia, S. C.

Buy Where You Find THIS SEAL



IT ASSURES YOU THE BEST AND NEWEST... plus FRIENDLY SERVICE

IT'S ALWAYS "BUYERS—KEEPERS" WITH

SPECS

Bore .800 —
Stroke .594 —
Bare weight 6 1/2 oz. — Aluminum piston, with rings — Crankshaft mounted with two ball bearings — Molybdenum iron cylinder liners — H. P. 3/4 at 17,500 R. P. M.

NEW "DOOLING 29"

Where "Dooling" owners are concerned, it's a "for keeps" situation. If you've seen a man with a railroad watch or a Cadillac, you know how a "Dooling" operator treats his engine. You know how he feels about it. And you have a good idea what his records are like. Tops.



Only \$14.95

Regulation Discounts to Jobbers and Dealers

DOOLING BROTHERS

5452 West Adams Boulevard • Los Angeles 16, California



SUPER FLASH

Class A/B. (19-24)
Area 380 in.

\$4.50

By Mail \$4.75

The SUPER FLASH is designed for tough flying competition. Construction is strong, its flying ability is ready to make a name for itself. To get the most of its speedy climbing ability, adjustable wing ailerons have been added to the wing.



PHOENIX SKIPPER

Class A/2
Seaplane

\$2.25

By Mail \$2.50

The PHOENIX SKIPPER quickly hops off the water, climbs high and comes down in a flat glide. The floats can be put on or off in a jiffy. Without floats the model makes a hot contest land plane with an exceptional flat floating glide. It can be therefore used in two contest events.



FLOATER

Soaring Glider
Wing Span 72 in.

\$3.00

By Mail \$3.25

"It takes a Floater to beat a Floater". The new Floater should continue making and breaking glider records just like the original Floater. Towing on a 200 foot towline should be easy even in a 25 mile wind with the detachable tow rudder control. Ribs are die cut.



THERMIC DART

A very popular all house handlaunch glider that will give hours of fun in coolest or sport flying. It is easy to build and fly.

25¢

BY MAIL 35¢

JUNIOR AERONAUTICAL SUPPLY CO.
203 East 15th St. New York 3, N. Y.



**NO NEED
TO LOOK
IT UP!**

in the **WEST**
its —

WESTERN MODEL
distributors

LEADERS SINCE 1933

- SHIPS • PLANES
- BOATS • ENGINES
- RAILROAD SUPPLIES
- KITS • CRAFTS • HOBBIES
- CARS • TOOLS • WHATNOTS

TWO CONVENIENT WESTERN LOCATIONS

LOS ANGELES
1576 West Adams Blvd.
Los Angeles 7, Calif.
Phone: Parkway 2161

OAKLAND
1106 5th Avenue
Oakland 6, Calif.
Phone: Templebard 4-9171

(Continued from page 73)

was the stick breaking, which required a fellow to break a piece a quarter-inch square between each maneuver. Since these balsa strips were set in a platform on the ground, some very tight flying was called for. Several contestants, realizing they would overshoot, actually dove their ships into the deck. In most cases those who did so broke only a propeller and bent back their landing gear.

Marv Becker of La Mesa had the toughest luck in this event. He hit the arm of the fellow putting out the sticks on his first attempt and completely washed out his super-nice stunt job. Since this was an accident, he was given the opportunity to use a second ship—and what happens? One of the strangest things we have ever witnessed: his glow plug unscrewed in flight. Looks as though it was not meant for him to fly in this event.

Chuck Baker, C-D for the meet, says they used up more than 300 pieces of balsa in the "stick trick." One little fellow was seen to carefully pick up all the pieces after each flight and wrap them in his jacket. He finally had to give up, having more wood than jacket.

Bill Alford really pulled a good one. He doesn't do too much flying, but spends most of his time helping Dennis. At this contest Dennis repaid him for the help. Bill had to have his son out in the circle while he was flying—now get this—to tell him the flight pattern. Dennis kept him straight too.

Those scale jobs, man oh man! Practically all the guys entered in the meet spent more time giving them a very close inspection than they did flying.

S. Estrada with his Champion powered Navion won as usual, since he has everything but the real engine duplicated. Arland Wright's F-51 called "Lover's Lane" was close on his heels. James Devitt's Douglas A-20 came in third. Beautiful ships, all of them.

It was especially gratifying to note a trend in realism in some stunt ships. Cliff Potts and Marv Becker, to name just two, had very interesting planes. Cliff's ship was a little like a Grumman, with a N.A.C.A. cowl on his sidewinder Torp 29. Finished in blue and red, it looked real nice and really moved through the pattern.

Becker's ship was a modified Vics job with tricycle gear, pants on the wheels, cowed, inverted Torp 29, most pretty. Yellow and black, very smooth finish, this ship is also very fast. Nice going, men.

We ran into two fellows new to the West, Artie Scholl and Karl Kortials from Milwaukee. They came out to see about school at Northrop, heard about the contest, proceeded to get busy and showed up at the meet with a plane. That's model builders for you.

On the way to the U-control meet we stopped off for a look-see at the R-C activity. There was plenty of it. Ships ranging from Half-A jobs to those very popular Rudder-Bugs.



CLASSIFIED ADVERTISING

Everybody reads the classified. Here is a section hand-tailored for anyone with something to sell or buy.

RATES: Minimum 14 words for only 20c per word.

Send remittance with ad to:
AIR TRAILS, 575 Madison Ave.
New York 22, N. Y.

SPECIAL OFFERS

Receive a 1/2 Class A model airplane and engine practically as gift. Details 10c. Hobbycraft, Box J-104, Brooklyn 30, N. Y.

WANTED

Wanted: 1000 used motors in part exchange for new motors and supplies. Send 3c stamp for full details. East Side Models, 432 Dewey St., Sandusky, Ohio.

MAGAZINES

Back number Airplane Magazines: 1906-1950. Send your want list. Moran, 3629 Oxford, Riverdale, New York.

BALSA WOOD

BALSA WOOD. 30,000 board feet AA Quality. About half of lot in retailable blocks, balance rough stock. Entire lot \$3750. 500 board feet retailable blocks \$150. FOB Troy, Ohio. Fox Model Airplane Co., R.R. #3, Box 54, Troy, Ohio.

CATALOG

Giant model catalog ready. Over 90 big, color pages. Engines, parts, kits, etc. Send 50c (Deductible) for your copy. Now! Jimmy's Variety & Sales, 3106 E. Osborne, Tampa 5, Florida.

Plans

AT's famous full-size plans. Order by number. 25c each. Every plan includes two or more models as listed, all on one sheet

#1051—Rumpler Taube Half-A free flight scale; The Fling speed model; Dummy Lifter PAA-Load; Stunt Chum Half-A.

#551—Fleet U-Control scale; Balsa glider trio; Clipper Chisai PAA-Load Model.

#451—AT Interceptor; PAA Cargo Carrier; Whee-38.

#351—Matthews' Crowbar PAA-Loader f.f.; Beck's Petit Pete A/2'er; Ehling's Wakefield.

#751—Stunt Rocket U-control stunt; flying wing free flight; parts for Skylark combo model.

#151—Reinhardt's stunt winner; Little Twister free flight, Semi-scale Bellanca; Sopwith Dolphin.

#951—Mac's Robot radio-control model; Folkerts Racer; and Ollie free flight.

#1150—Wee Bee scale free flight and U-Control, deHavilland Moth; Screamliner "60"; Kinglet.

#851—Screamin' Demon national meet speed winner; Nordic A/2 towline glider and Jetex powered Opel, world's first rocket plane.

NOTE: Allow 3 weeks for delivery by Third Class Mail. For First Class add 9c postage per plan ordered; for Airmail add 18c postage per plan ordered.

Air Trails Plan Service

304 East 45th St., New York 17, N. Y.
I enclose 25c for each plan listed:

List by number

Name (print)

Address

City-Zone-State

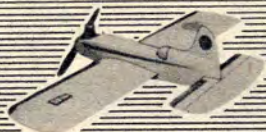
(AT-1051)

The All American Team ☆☆☆☆

The RIGHT combination of Airplane Engine and Accessories • Learn to fly, learn to stunt, learn to Win Contests with this perfectly balanced team of Superior DMECO Models



All American Jr.
BASIC-TRAINER
BUILD IN 2 HOURS \$1.75



All American Jr.
STUNT-TRAINER
READY TO ASSEMBLE \$2.50



"All American"
STUNT MODEL
PREFABRICATED KIT \$4.95



All American Sr.
CONTEST STUNT
STAR OF THEM ALL \$5.95

Every member of the team features "Asymmetrical Stability", the new sensational means of obtaining a cleaner, lighter model of superior performance. All kits are completely pre-fabbed from the finest HAND PICKED materials, plans are FULL SIZE and a formed dural gear is included.

DMECO MODELS FOR FUN AND PLEASURE

"SPEEDSTER"



For 1/2-A team racing and speed \$2.50

"Infant WAGON"



For 1/2-A stunt flying at its best \$1.95

"New BIPE"



A real model for sport and stunt training \$3.95

"SPORTWING"



A new, modern and different stunt model \$3.95



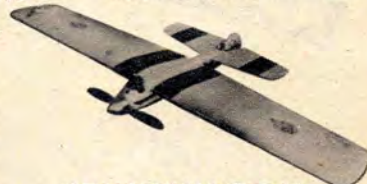
SPEEDWAGON

Speedwagon '50	\$5.95
Speedwagon '30	\$4.95
Speedwagon '20	\$3.95

America's Finest COMPETITION MODELS

When you are preparing for those coming big contests and really want a winner, think of these tried and proven "dmeco models."

Perannual contest winners and record holders!



STUNTWAGON

Stuntwagon	\$7.95
Stuntwagon '30	\$5.95

Ask your Dealer to
Show You any "Dmeco"
Model TODAY!

The deBul.T

MODEL
ENGINEERING CO.
WILLIAMSVILLE

"Home of Design-Engineered Models" NEW YORK

Colby Evett has one of the most promising jobs we have seen. He uses two separate receivers for his two-channel operation. One a RK61, the other an English circuit. His set-up has a multitude of variations, merely by switching circuits. In one condition he has a rig for elevator and rudder, the elevator coming in after the bomb is dropped.

Colby has a micro-switch which cuts out the elevator circuit. His motor control is very simple and likewise effective. He uses two needle valves and two fuel lines; the motor runs fast with the second valve out. When the relay is actuated, it lifts the valve in the K&B shut-off and allows more fuel to get to the engine, thus slowing it down. Real nice. His ship shows very good construction, all the wiring very neat. Slotted wing and tryke gear.

W. S. Deans had the first Rockwood set we have seen. He uses motor-rudder and elevator. Deans' motor was one of the very few ignition jobs; he advances and returns the spark arm for motor control.

Andrew Bauer from Columbus, Ohio, who had been in California just one week, had a small forty-four inch wing-spread semi-midwing Mac 19 job, which looks like a racer.

There were plenty of other ships there; the boys were having a big time. It was sure nice to see that they have found a fine place to fly, an old abandoned airstrip south of Santa Ana. Lots of room and a secluded spot.

Speaking of flying sites, the L. A. gang now have a real location in the Sepulveda Basin. Our first glimpse of this site was a joy to behold, acres and acres of flat ground with no obstructions. The
(Continued on page 78)

DEALERS DEALERS

LET OUR 20 YEARS OF EXPERIENCE HELP YOU

TO MAKE MORE SALES AND PROFITS

We have FAST, FRIENDLY and DEPENDABLE service to Maine, Vermont, Connecticut, Rhode Island, Massachusetts and New Hampshire.

One complete source for all your hobby and model needs. Not only the big items, but all the small ones, too. You can count on Northeast the year 'round.

NORTHEAST
Hobby Distributors

87 High Street
Boston, Mass.

WORLD'S FASTEST BOATS!



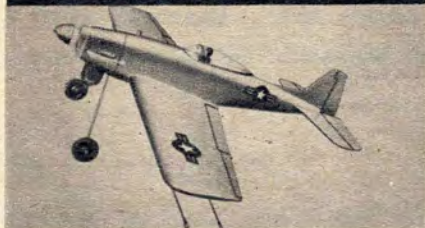
BUILD and DRIVE your own HIGH SPEED RACING BOAT as hundreds of others are doing! Easy to follow our simplified plans for newest types of racing craft. Large selection of full race Hydroplanes ranging from 6 ft. to 20 ft. lengths. Service, Racing, Utilities, and 3 Points. Both inboard and outboards.



Send 25c for Catalogue

containing pictures and descriptions of Champion Boats for which plans are designed and distributed exclusively by CHAMPION BOATS, P. O. Box 9038, Dept. 43-J, Long Beach, California, U. S. A.

Did you know?



... that Scientific Model Airplane Co., Manufacturers of the MUSTANG 1/4 U-Control model, advises using TRIM-FILM PRODUCTS in trimming your models. "Nothing better can be had."

Send now for free sample and 'TIPS' booklet today!

Manufactured by
HOBBY DECAL SPECIALISTS
314-A Elm Street Perth Amboy, N. J.

Yeco PRODUCTS

The Champions' Boast
From Coast to Coast!

CONTROLINE KITS

- Brave
- Warrior
- Chief
- Squaw
- Papoose
- Scout

FREE-FLIGHT KITS

- Dakota
- Sioux
- Taylor Cub

CHIEF

Engines • Planes
Propellers • Wheels • Accessories

HENRY ENGINEERING CO
Burbank, California

NEW!

SCALE MODEL
Marine
Accessories

PRECISION CAST BRONZE PROPELLERS

Three Blade 3 & 4 Blade Propellers

No. 1480-110" dia., 2" pitch, 1/2" hole... \$1.25
No. 1500-110" dia., 2" pitch, 3/8" hole... \$1.25

Two Blade Marine Propellers For V8 Engines

No. 1600-110" dia., 1" pitch, 1/2" hole... \$1.25
No. 1610-1" dia., 1" pitch, 1/2" hole... \$1.25
No. 1620-1" dia., 1" pitch, 1/2" hole... \$1.25

No. 1490-110" dia., 2 1/2" pitch, 1/2" hole... \$1.25
No. 1500-110" dia., 2 1/2" pitch, 3/8" hole... \$1.25
No. 1510-110" dia., 2 1/2" pitch, 1/2" hole... \$1.25
No. 1520-110" dia., 2 1/2" pitch, 3/8" hole... \$1.25
No. 1530-110" dia., 2 1/2" pitch, 1/2" hole... \$1.25
No. 1540-110" dia., 2 1/2" pitch, 3/8" hole... \$1.25

O & R .29 MARINE ENGINE

Power your model boat with this new front end fly wheel, easier starting Marine Engine. Complete with ball bearing thrust, flywheel and "cushioned" Universal Coupling.

14.95



IF NOT AVAILABLE AT YOUR HOBBY DEALER ORDER DIRECT

SEND 15c TO DEPT. H FOR ILLUSTRATED CATALOG!

OHLSSON & RICE, Inc.

Emery at Grand Vista, Los Angeles 23, California

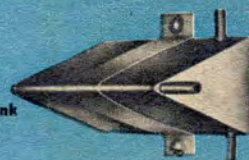
SHOWCASE

TRY YOUR FAVORITE HOBBY SHOP FOR ITEMS PRESENTED HERE.
ALL DATA CHECKED CAREFULLY, BUT IS SUBJECT TO CHANGE



Scale Sabre

Monogram Models (225 N. Racine Ave., Chicago) is out with three new Speedee-Bilt scale jobs for 85¢ each: the F-86 Sabre Jet, F4U-5 and P-40F.



Wedge Tank

Made completely and only of brass are Acme Model Engineering Co. (8120 7th Ave., Brooklyn) fuel tanks. Shown: "B" wedge 1 1/2, 2 1/4 or 3 in. 85¢



Smallster Hupmobile

This little job here is a 1909 Hupmobile. As kitted by Fador Mfg. Co. (501 E. Clinton St., Elmira, NY) it's a 5 1/2" wheel base job, Smallster line, \$2.50.



Prefab Flyers

Brand new addition to Cleveland Model & Supply Co. (4507 Lorain Ave., Cleveland) is "Quicky" series: Luscombe, Cub and Aeronca Chief; 59¢



PDQ Super Clown

Philadelphia flash is the PDQ Super Clown stunt plane. \$2.95 by PDQ Products Co. (Tulip & Dauphin Sts., Phila.) Span is 38 inches, takes .23 to .45 motors.



O&R's Latest Catalog

Ohlsson & Rice (3344 Emery St., Los Angeles) has interesting 15¢ 1951 catalog. Covers: model aircraft engines, marine engines, racers, glow plugs, fuel.



Packed Full of Items

The '51 catalog on planes, boats, crafts and vehicles issued by Electronic & Hobbycraft Stores, Inc. (130 W. Chelton Ave., Phila.) for 25¢ is loaded.



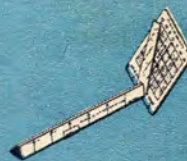
Storey's "Quest"

This is Keith Storey's team racer "Quest" kit by Berkeley Models (West Hempstead, LI, NY). \$4.95. (.23 to .36 disp.) Metal cowl, canopy, gear formed.



Takes B & C Motors

Capable of executing the entire stunt pattern is this \$5.95 Ryan ST, says its maker, Sterling Models (1530 N. Hancock St., Phila., 22). Metal cowl.



What's the Pitch?

At last! We can determine with ease the pitch of any prop. Hoffman Products (Box 447, Chicago 90) simplifies prop designing with \$1 Slide Pitchmeter.

SUPERSONIC FUELS

DEVELOPED BY
Lew Mahieu
produced under
his supervision.

A FUEL FOR EVERY
ENGINE - PERFECTLY
BLENDED FOR EASY
STARTING, POWER
AND PERFORMANCE.

K&B MANUFACTURING CO.
224 E. PALMER AVE.
COMPTON • CALIFORNIA

RADIO CONTROL

Complete Unit **\$37.50**
less Batteries

Consisting of Transmitter & Tube, Antenna, Escapement, and Receiver with Relay and Tube.

ALSO READY NOW
Our New
INSTRUCTION MANUAL

with complete circuits, diagrams & directions for flying model airplanes by Radio Control.
Price Postpaid. **50 CTS.**

Send for Free Catalogue.

RADIO CONTROL HEADQUARTERS
Belmar, New Jersey

New Profile-shaped Solids
MAIRCRAFT JUNIORS
6 BEAUTIFUL MODELS

✓ FUSELAGE AND WINGS
CUT TO SHAPE

✓ REALISTIC BALLOON
WHEELS AND PROPS

✓ FULL 1/6 SCALE
STEP-BY-STEP PLANS

ORDER FROM YOUR Dealer NOW

MAIRCRAFT **EACH 15¢**
ROSELLE, ILLINOIS



Paul's
Eggbeaters

Good for Guillow! Paul K. Guillow (Wakefield, Mass.) has two new helicopter scale model kits for 25¢ each. One is the Piasecki; other, Sikorsky H-5.

Scranton's
Horseless
Carriage



A horseless carriage that needed no water was a big deal back in 1902. Scranton Hobby Center (315 Adams Ave., Scranton 10, Pa.) has 3/4" scale kit, \$2.50.



Jasco's
Super Flash

Super Flash is Class A-B free flight for .19 to .24 powerplants by Jasco (203 East 15th St., NYC 3). Span is 52 inches, wing area is 380 sq. in. Sells for \$4.50.



Test
Stand

Test and break-in stand that clamps engines up to .19 disp. in a few seconds is Phil-Leys (Cheektowaga, NY) E-Z Just Minimount. 85¢. Hardwood.

Little
Sabre



Close to the real things is the Little Sabre by Scientific Model Airplane Co. (113 Monroe St., Newark 5, NJ). Span is 18", takes .02 to .074's. Kit, \$1.95.



Testor's
One-coat
Coverage

Especially formulated for model airplanes, Testor Chemical Co's dope gives one-coat coverage and smooth, high-gloss surface. In 27 colors; 15¢ and 25¢ jars.

NEW MOTORS FOR OLD

Trade-in one of your old motors (any make, any condition) for 1/4 the price of any new motor up to \$20.00.
See motor manufacturers' ads for prices, we stock 'em all!

FREE! Brand new Fox 35 with Vernon MacNabb citizenship radio control.

Transmitter \$39.75
Receiver 39.75
Fox 35 14.95

Regular \$94.45 value, plus extra bonus gift of 12 rite-pitch propellers all for our special combo price, only \$79.50 P.P.

FREE! 12 propellers with every new motor. Your choice of sizes: 6x3, 6x4, 7x3, 7x4, 7x6, 8x4, 8x6, 8x8, 9x4, 9x6, 9x8, 10x4, 10x6, and 10x8. (Not included if you claim trade-in allowance.)

Pre-paid orders shipped postpaid, or send \$1.00—we ship C. O. D. for balance and postal charges.

These offers available only from:

ALL AMERICAN MODEL MOTOR EXCHANGE
Dept. A, Box 885, Santa Monica, California

MARGO KRAFT
DISTRIBUTORS, INC.

WHOLESALE ONLY

- COMPLETE STOCKS
- QUICK SERVICE • TOP QUALITY BRANDS

Chip-Carving
Construction Toys
Craft Books
Craftstrip
Finger Painting
Glass Etching
Leathercraft
Link Belts
Metal Crafts
Miniature Engines
& Accessories

Model Railroad Kits—
engines & accessories
Rubber Molding &
Coloring Sets
Scale Model Construc-
tion Kits—planes,
boats, etc.
Shellcraft
Textile Colors
Wooden Boxes & Plates

DEALERS: write for 120-page 1952 Catalog

MARGO KRAFT

DISTRIBUTORS, INC.

419 South 6th St., Minneapolis 15, Minn.
(Formerly Modelcraft Distributors, Inc.)



9 beautiful power boat construction kits—25" to 33 1/2" length. \$5.50 to \$9.50. Write for literature on boats, motors, fittings. At all hobby stores. Chris-Craft, Owens, Harbor, Vinyard, Colonial. Large boat construction from factory plans.

DUMAS PRODUCTS

2347 Aviation Highway, Tucson, Arizona
World's Largest Builder of Motor Boat Models

TIMES may get tougher,
PRICES rise higher
MATERIALS become tighter,
MODEL ENGINES scarcer

but as long as we are
allowed to make engines



FORSTER ENGINES

will be made to the HIGH QUALITY standards for which they are so well known. If you want and appreciate quality in every detail, ask your dealer to show you

FORSTER GLOW ENGINES

write us for literature

FORSTER BROTHERS

82 E. Lanark Ave.

Lanark, Ill.

HAW-KI

HOBBY SUPPLY CO.

WHOLESALE ONLY

ALL NATIONALLY ADVERTISED
BRANDS OF

- ★ MODEL AIRPLANES
- ★ RACE CARS
- ★ RAILROAD EQPT.
- ★ CRAFTS AND TOYS

WRITE
for current
catalog today!

PROMPT
and speedy
delivery

HAW-KI HOBBY SUPPLY CO.

DEPT. AT-2 523 WEST 4TH
Davenport, Iowa

(Continued from page 75)

scene as set up for the Plymouth eliminations is one which we sincerely hope will be duplicated many times in the future. Lots of signs telling you where to turn, one huge sign to enlighten the public of the event taking place. The flying site itself landed a true country club affair, with beach umbrellas at each event pit, tables and chairs for the timers, a water cooler at every table. Truly the "Sepulveda Country Club Model Airport."

Andy Peterson, who is usually on the other side of the fence, directed this free flight event which showed unusually good organization. Each event director was a tried and true open flyer, while all the timers were those guys who win in most other contests. Wonder how it felt to be on the receiving end of the beef?

Andy made a last-minute change and allowed registration at the field when some of the Plymouth dealers ran out of entry blanks; hence the beefs, some fellows finding themselves pushed a little further down the ladder when the last-minute entrants put in some good flights. But as Andy said, he could see no reason to penalize the contestants and not let them enter when it was through no fault of their own. Besides, he continued, the contest was to get the best modelers back to Detroit, not one of those concerned with who made the first entries. Nice going, Andy. You and that gang of yours showed you can really run a contest.

The U-control eliminations were held the next day, Sunday, where again we found those experts running the different events. Kenny Ameyer was C-D. The FAST Club held down the speed events while Bob Palmer and Hy Johnson did a swell job judging the stunts.

It was quite nice to see the scale jobs entered. Most of them were built from kits, Pitts Specials, T-28's, Polish Fighters and SE-5's holding forth. Some real slick jobs.

As seems to be usual, the combat flying stole the show. Bob Thomas and Tom Davey were the finalists and the fellows are still talking about the exhibition the two put on. Some real tight flying.

Johnny Brodbeck put in an interesting flight with a Half-A Hell Razor powered with a Torp .049. Speed was slightly over 57 mph. Judging from the gang around Johnny getting details of this ship, we are looking for a rash of Half-A speedsters.

Another newcomer to California, Paul White from Akron, who now lives in Monrovia, put on an exhibition flying a Dido which made the old-timers sit up and take notice. Really good.

The San Diego PAA load contest gets bigger and better each year. This year the local club added the Clipper Cargo and towed glider events, these proving very interesting.

There were only two cargo ships entered and both experienced take-off troubles since the take-off area was not

SHIPS AND HISTORIC MODELS



New exciting catalog of historic Autos, Planes, Trains, Fire Engines, Cannon, Boats, etc., etc. Over 300 illustrations with many historic notes.

Send for your copy now. Only —25c. Military Miniature Catalog—15c.

CORR'S

812-818 Ninth St., N.W.
Washington 1, D.C.

DEALERS WRITE

FOR THE COMPLETE

TROST A to Z LIST

Our complete A-Z list of "TROST LINES" includes most of the best known brands, plus many lesser known parts and supply items you never know just where to buy. This list will help you keep your stock complete. Write for it now.

TROST

Modelcraft and Hobbies

3111 W. 63rd St. Chicago 29
PLANES-TRAINS-SHIPS- PARTS-SUPPLIES



\$2.95
EACH

Beautiful, precision Half 'A' flying-scale models! P-51 & Corsair ready! Kits contain carved, hollowed fuselage, cut-to-shape wings, stabs, rudder and super detailed plans.

hell razor

World's finest prize-winning model! New 1/2 A HELL RAZOR—87MPH. 9" span \$2.00; 159.6MPH original with MAG-NESUM bottom: Class 'A' \$5.95; 'B' \$6.50; 'C' & 'D' \$8.95. MAIL ORDERS FILLED (No C.O.D.)



CONSOLIDATED MODEL ENG. CO.

3087 3RD AVE. (AT-10), NEW YORK 56, N. Y.

LOOK

TO



EDWARDS' FOR

FAST SERVICE

DISCOUNT TO DEALERS

COMPLETE STOCKS

EDWARDS' HOBBIES

108 E. CASS ST. TAMPA FLA

"Rite Pitch"



WORLD'S

FINEST

PROPELLERS
GAS TANKS
MODEL CEMENTS
see your dealer today!

manufacturer
"Rite Pitch"

6655 East Dunes Hwy. Gary, Indiana

AIR TRAILS



Hobby Shop Directory

Model Builders! Here's a listing of the nation's leading hobby shops. You'll want to file it away—and when you're in the neighborhood, drop in and browse around. They're expecting you.

CALIFORNIA—LOS ANGELES

Nationally advertised model planes, boats, trains, kits and supplies. Weekdays and Mon.-Wed.-Fri. Eves.

PICO MODEL CO.

2540 W. Pico Blvd. DUnkirk 7-5894

INDIANA—INDIANAPOLIS (19)

Model Planes, Trains, Race Cars Motor Parts

Lionel—American Flyer Repairing 10:30 to 7 P.M. Daily

BOB STEELE HOBBY CENTER

1008 No. Emerson Ave. Irvington 1617

KENTUCKY—LOUISVILLE

Model Airplanes—Motors—Race Cars & Supplies. Complete Parts & Service. Repair shop with South Bend Lathe.

FISCHER'S HOBBY SERVICE

618 S. Fourth Clay 3213

LOUISIANA—NEW ORLEANS

Airplanes — Boats — Supplies

TT-HO-S-O Railroad

Open 9-5; Sat. 9-3

CRESS MODEL SHOPPE

1134 St. Charles Ave. Ra 4873

LOUISIANA—SHREVEPORT

Louisiana, Arkansas, and East Texas' most complete supply of Model Planes, Trains, Cars, and Boats.

WEISMAN'S TOY STORE

717-719 Milan St. Phone 3-4345

MASSACHUSETTS—CAMBRIDGE

Model planes, motors, railroads, ships and accessories.

9 to 6 daily and Thurs., Sat. evenings.

CROSBY'S HOBBY CENTRE

1704A Mass. Ave. KI 7-4389

MISSOURI—KANSAS CITY

Model Airplane, Boat, Race Car, Railroad and Hobby Supplies.

Open 8:30 A.M. to 9:00 P.M. and Sundays

NORTHEAST HOBBY CENTER

4825 Independence Ave. BE 7849

MISSOURI—PORTAGEVILLE

Model Airplanes—Motors—Race Cars and Supplies. Only National Adv. Mdse. Sold. South East Missouri's Finest

HOBBY CENTER

Mosby Hardware Phone 21

NEW JERSEY—HADDONFIELD

South Jersey's Complete Model Shop.

Largest Stock

Planes Engines Supplies

Open noon till nine daily

HIGHWAY HOBBY HOUSE

20 Tanner St. Haddonfield 9-6860

NEW YORK—NEW YORK

DEALERS

Tell the local hobbyists about your shop in this inexpensive way.

For details write to:

AIR TRAILS

575 Madison Ave. PL 9-2080

NEW YORK—JAMAICA (3)

HOBBIES — THAT'S ALL!

Regular Hours 9 a.m. to 7 p.m.

9 a.m. to 9 p.m. Mon. & Fri.

9 a.m. to 7 p.m. Saturdays

Holiday Hours (Nov. to Feb.)

11 a.m. to 9 p.m. daily

JAMCO (Jamaica Co. Hobbies, Inc.)

90-04 168th St., Phone JA 3-9140

NORTH CAROLINA—CHARLOTTE

Ask Anyone!
In the Carolinas
It's

CHARLOTTE HOBBY CENTER

131 W. Fourth Phone 4-4188

OHIO—DAYTON

Convince yourself: Since 1928, folks traveled many miles to shop our mammoth stock; Open Sunday

GOOD'S HOBBY SHOP

1729 N. Main St. Taylor 5578

OKLAHOMA—OKLAHOMA CITY

Oklahoma City's largest exclusive Hobby Shop. Use Air Trails & Model Railroad for catalogs.

9:00 A.M.—6:30 P.M. (12-4 Sun.)

CAMPBELL'S MODEL AIR DEPOT

1133 NW 23rd Okla. City, Okla.

OREGON—PORTLAND

Complete lines of Planes-Engines-Boats Race Cars - Railroads - Vehicles and Handicraft Supplies.

10 A.M. to 6 P.M. Weekdays

Closed Sundays

VIC'S HOBBY SUPPLY

1824 N.E. 40th Ave. Garfield 3108

WASHINGTON—SEATTLE

Good Service—Helpful Advice
Complete Stock

Planes—Boats—Cars—H O Trains

10-6 P.M. W-F 10-9 P.M.

BUZZ & DOUG'S HOBBY SHOP

701 E. Pike at Boylston Ea 8650

too good. Test flights with these ships indicated not too much trouble getting off with 11½ ounces of weight, while flight times under these loads made the fellows believe that even greater loads could be carried.

Dick Sladek made some preliminary calculations for this type of model and found the following to be true. Build a model of 340 square inches of wing area, construct the wing for a lift coefficient of .9, which is fairly low, speed necessary to sustain flight at 17 mph. Equal or exceed these figures and it is possible to lift 16 ounces of load if the model weighs five ounces. In other words, the maximum model weight with load can be 21 ounces. Experience has indicated this to be very true.

The Tow Glider event proved to be tougher than expected. No trouble in take-off but an oscillating tow made flights almost impossible with all points used, except a double line from wing to wing. Dick Sladek was the only person who managed to get any semblance of flight. He missed making any official flights merely because time did not allow him to build in a glider release.

The Half-A event proved to be the most popular, having practically all the contestants in this class. Times were fairly high. Dick Everett won first in open with a total of 14:51, his longest flight being 6:08. Russ Wilson could have pushed this except for a stubborn dethermalizer which did not pop high enough. Tom Moffit won Junior-Senior Half-A for his third win with his "Paakid." Some of the fellows even

used Mills Diesels, but the ships were too heavy and had take-off troubles.

The sixth NCCFFC meet proved to be one of those things. On the day of the contest the Air Patrol notified the officials that there was a special radar program on that day and didn't want them to fly. It took a lot of talking until they were given a small section in one corner of the field to fly. Then the wind—ships going out of sight so fast that some fellows decided not to fly.

Another Junior made himself seen and heard at this contest, Gale Strom-

berg of the S. F. Vultures. All he did was win a first and two seconds; against some pretty fair flyers, too. Congratulations, Gale. Keep it up.

Lyman Armstrong had a busy time punching T.S. cards at the second Annual Marysville contest. Seems like the fellows didn't like the \$1.50 entry fee and the ten-minute limit. Getting old, boys? Is the ten too long a chase? Johnny Murphy, Deputy Sheriff, did a swell job locating the lost models, flying a full-size ship all day long, taking the guys up and spotting.



Exhibit this
AUTHENTIC
model!

Douglas SKYROCKET

Wingspan 4½"
Fuselage 8½"

Realistic jet-rocket solid-wood model of the "flying swordfish". All parts ready-shaped for quick assembly. Complete with full-color decals, plastic canopy, and display stand... 69¢

At your Hobby Dealer Or
send for free catalog

STROMBECK-BECKER MFG. CO.
Moline, Illinois, Dept. AT-10

StromBecker

DESERT STREAK \$595



A COMPLETE SPEED PLANE KIT built around the famous DESERT STREAK, Special alloy—highly polished speed pan. Flush riveted sheet aluminum wings and tail assembly—Aluminum spar—Precut Balsa cowl and top.

*A-B—\$5.95 C-D—\$6.45

At your dealers or postpaid from

DESERT MODEL CO.

2130 E. BROADWAY, PHOENIX, ARIZONA
Dealer inquiries invited. No C.O.D.'s

ENGINEERING DEGREE

Graduates in Demand

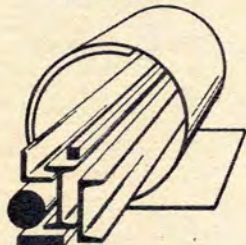
• Speed-up training in Engineering — Aeronautical Chemical, Civil, Electrical Mechanical and Radio (including Television). B.S. degree in 27 months. Frequent trips to outstanding industrial plants. Modern lab facilities. Earn part or all of your expenses in this large industrial center. Low tuition. If you are called into service while still a student, you will be prepared for a specialized military job, AND can return to school without losing credits. Approved for veterans. Enter Dec., Mar., June or Sept. Send for free catalog today.

INDIANA TECHNICAL COLLEGE

3101 E. Washington Blvd., Fort Wayne 2, Ind.

MAGNESIUM

FOR ALL
MODEL MAKERS



ROD, BAR, SHEET
SCALE STRUCTURAL SHAPES

Write For Literature and Prices

THE CRAFTSMITHS

15427 Robson Detroit 27, Mich.

BEAUTIFULLY DETAILED SOLID MODELS



F8F BEARCAT... \$2.75

British Spitfire	\$2.75	P-51 Mustang	\$2.75
FW-190 Focke Wulf	2.75	F6F Hellcat	2.75
P-40 Warhawk	2.75	P-47 Thunderbolt	2.95
F4U Corsair	2.75	P-38 Lightning	3.50
ME-109 Messerschmitt	\$2.75		

Ask your dealer for "Dyna-Mo". If he cannot supply you write us direct, enclosing check or money order plus 25c for packing and postage—no C. O. D.'s. Watch our ads for Dyna-Model's new JETS!

DYNA-MODEL PRODUCTS COMPANY

76 SOUTH STREET, OYSTER BAY, NEW YORK

SMALLSTER AUTO KITS

AUTHENTIC MINIATURES OF CARS OF BYGONE DAYS

GRANDFATHER'S PRIDE OF YESTERYEAR
FOR YOUR PLEASURE TODAY!

KIT OF THE MONTH

1905 REO

4-passenger
Runabout
Wheel base 5"
Only \$2.50

Smallster antique auto kits are designed for easy step-by-step construction, contain precision built die-cut parts. Completely prefabricated kits incorporate realistic details on all plastic parts.

OTHER SMALLSTER AUTO KITS AVAILABLE AT YOUR FAVORITE HOBBY SHOP

LOOK FOR THE ATTRACTIVE GREEN AND BLACK JAWLINE LOGO

FADOR

MANUFACTURING CORP.

501 E. CLINTON ST. • ELMIRA, N. Y.

One of those very rare ties came about in Class B when Dan Sullivan and Gale Stromberg (that fifteen-year-old again, and both Juniors, incidentally) tied with a 17:25 total. Dan was awarded second due to his shorter engine runs, with totals of 47 seconds against Gale's 50 seconds. Seems like a hard way to decide a contest, but—any other ideas?

One sad item which we have left for last is that of models being picked up along a road and carried away by persons unknown, leaving a hot, tired model builder very down-hearted at having his prize model spirited away. This happened at the Plymouth eliminations to Tom Moffit, when his new Class A payload ship powered with a Torp was picked up by a passing motorist.

The laws in California specifically prohibit this but to no avail, since it is usually impossible to catch such a culprit. Perhaps one good way to entice finders into returning models is to put a little note on them such as one English fellow does: "This is an experimental model presently undergoing tests, if found please notify John Smith so that the tests may be completed." Looks like a good idea, why not try it?

—DICK EVERETT

Dope Can

(Continued from page 69)

difference between high and low speeds, since points are the same for all scale models and take-off and landing points are the same regardless of form as long as the requirements are met. Now comes the stroke of genius that sets me off from other ordinary, less modest people.

"With careful construction, as light as possible, and a good smooth finish, top speed of most models should not fall much below 50 mph. Now, what speed would give the maximum difference? Naturally, it would be the minimum possible. Now supposing this low speed was zero? How? you ask. Simple. If a model could be put into an inside loop and held there until the contestant tires. Since the model has not progressed any around the circle, its relative speed has been nil. There are any number of scale models which are capable of such aerobatics: the F4B, the F3F or the P6E.

"Now with one of these ships with the maximum permissible wingspan of 44" and a good reliable engine, good stunt performance should result. Even a speed of 20 to 30 mph would give you 30 mph difference.

"Here's another one: if the model were inverted and flown in that position, it would technically be going backwards, would it not? This way it is possible to obtain a negative forward speed. Boy, would those points pile up with a fast ship, eh?

"Oh, well, it was an idea, anyway, and I'm just passing it on."

Willing to Write. Horace V. Williams, 409 Lancaster Ave., Monroe, N. C. would like to correspond with German solid modelplane enthusiasts between the ages of 13 and 20. Horace is building a collection of 1/4" to the foot scale models from the earlier planes up to the present time.

Ted MacIntire, Royersford R.D. 1, Penna., is looking for a pen-pal around 14 to 16 interested in U-control and free flight. Robert Zukowski, 2509 Edgar St., Pittsburgh 27, Pa., says he has back copies of AT and other magazines. He'd like to pass them on to interested

PHOTO CREDIT LIST

Pages 19-20-21—Charles Kaman.
Pages 24-25—Albert Rosse.
Page 62—J. Acker.

ADVERTISERS' INDEX

October, 1951

Acme Model Eng. Co.	54
A-J Aircraft Co.	11
All American Model Motor Exchange	77
America's Hobby Center	6, 7, 9
Arnold & Fox Engineering Co.	60
Atwood Mfg.	52
Austin-Craft Co.	62
Berkeley Models, Inc.	82
Boyle-Midway, Inc.	70
Buzz & Doug's Hobby Shop	79
Cal-Aero Technical Institute	5
California Flyers	Second Cover
Campbell's Model Air Depot	79
Champion Boats	75
Charlotte Hobby Center	79
Cleveland Model & Supply Co.	63
Comet Model Hobbycraft, Inc.	64, 65
Consolidated Model Engineering Co.	78
Corr	78
The Craftsmiths	80
Cress Model Shoppe	79
Crosby's Hobby Centre	79
Dallas School of Aviation	13
Dealers Hobby Supply	81
deBolt Model Engineering Co.	75
Desert Model Co.	79
Doelling Bros.	73
Dumas Products	77
Dyna-Model Products Co.	80
Edwards' Hobbies	78
The E and H Stores	81
Embry-Riddle School of Aviation	16
Enterprise Model Aircraft & Supply Co. Inc.	59
F & B Model Aircraft	67
Fador Mfg. Corp.	80
Fischer's Hobby Service	79
Forster Brothers	78
Francisco Laboratories	18
Good's Hobby Shop	79
Gotham Hobby Corp.	81
Paul K. Guillow	53
H & P Plastic Products Co.	69
Haw-Ki Hobby Supply Co.	78
Henry Engineering Co.	76
Herkimer Tool & Model Works, Inc.	Back Cover
Highway Hobby House	79
Hobby Decal Specialists	76
Hoffman Products	71
Indiana Technical College	80
Jamco (Jamaica Co. Hobbies, Inc.)	79
Joy Products	68
Junior Aeronautical Supply Co.	74
K & B Mfg. Co.	73
Leitzsey Model Dist.	77
Vernon C. MacNabb	64
Malcraft	77
Margo Kraft Dist., Inc.	77
Master Modelcraft	81
McGraw-Hill Book Co., Inc.	65
Mercury Model Airplane Co.	73
Miniature Aircraft Corp.	66
Mod-Ad Agency, Inc.	57
Mod Kraft Co.	71
Model & Hobby Industry	73
Model Craft Hobbies, Ltd.	67
Monarch Model Co., Inc.	69
Monogram Models	55
Mosby Hardware	79
Mutual Broadcasting System	60
National Broadcasting Company	52
National Model Distributors	54
North American Model Products	70
Northeast Hobby Center	79
Northeast Hobby Dist.	75
Northrop Aeronautical Institute	8
Ohlsson & Rice	76
Pactra Chemical Co.	72
PDQ Products Co.	72
Parks College of St. Louis University	3
Perfect Quality Model Accessories	58
Pico Model Co.	79
Polk's Model Craft Hobbies	68
Radio Control Headquarters	77
Rite Pitch	78
Russell Bros. Products	81
Scientific Model Airplane Co.	15
Scranton Hobby Center	62
Shevlin Mfg. Co.	54
Sky Hobby, Inc.	81
Southland Models	71
Spartan School of Aeronautics	10
Speed-O-Lag Products Co.	51
Bob Steele Hobby Center	79
Sterling Models	71
Strombeck-Becker Mfg. Co.	79
Testor Chemical Co.	43
Top Flite Models, Inc.	3rd cover, 42, 61
Trust Modelcraft Hobbies	78
United States Rubber Co.	17
Vic's Hobby Supply	79
Weisman's Toy Store	79
Western Model Distributors	74
X-Acto Crescent Products Co., Inc.	12

While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this October, 1951 index.

Another Hit Kit!



BLUE
RIBBON
MODEL

AUTHENTIC SCALE — BIG 20" SPAN — 15" LENGTH
"IKE"
FOR ENGINES FROM .049 TO .099 DISPLACEMENT

\$3.00

by mail add 25c to price of all kits listed here.

It's new—it's completely prefabricated, it's Benny Howard's famous "Ike" Racer. The ideal sport-scale job for beginner or expert. Big 20" True-Foil Wing. Large 15" Micro-Metric Fuselage. Beveled Wing-Well for correct alignment of wing. Die-Cut tail assembly and wheel pants. Complete hardware plus super detailed Deep-View plans. Takes all engines from .049 to .099 displ.

YOU'LL WANT TO BUILD AND FLY THESE MASTER MODEL-CRAFT MASTERPIECES



FLIP-FLAP
24" span,
.074-.029
displ.
\$3.50

PRIMER
18" span,
.020-.099
displ.
\$1.40



S. E.-5
17" span,
for half-A's
\$2.50

SKY-LARK
31" free-flight, for half-A's
\$2.00



WING DINGUS
16" span,
.020-.099
displ.
\$2.25

WING DING
18" span,
.020-.099
displ.
\$2.25



MASTER MODEL-CRAFT 727 Westchester Ave., N. Y. 55, N. Y.

parties. Write him for information.

Hellmut Malkmur, 10a Hinderburg, Fulda, Germany (U. S. Zone) is a member of an active model club which would like to correspond with American groups.

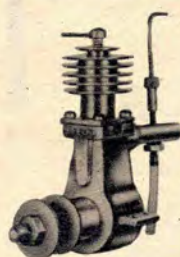
Grahame Melven, 55 Adamton Road North, Prestwick, Ayreshire, Scotland, is 18, an aircraft apprentice at Scottish Aviation Ltd., Prestwick, whose main interests are control line stunt and free flight plus some scale building. He's a member of the Prestwick MC. Looking for a pen-pal for himself and also some American club which might write to his organization.

ROTC Air Force. There's a bantam-weight air force at the University of Illinois, Urbana-Champaign, Ill. Every Tuesday night, fair weather or foul, modelplane enthusiasts gather in the huge University armory where the air is filled with the snarl of midjet motors.

It is said this is the only model club under the sponsorship of AF Reserve Officers' Training Corps unit. The group has named itself the Illini Liners, since all flying is with line-controlled craft. Membership is open to everyone: ROTC cadets, other students, University staff members, and people of all ages from the community. At present there are 30 members. A gallery of 150 to 200 spectators often turns out to watch the flying.

The armory, 99 feet high, 200 feet wide, 400 feet long and with unobstructed floor space, provides ample room for two circles to operate at the same time. Starter carts and batteries are supplied by the Army ROTC transportation corps unit—a nice sign of interservice cooperation!

Lt. Col. F. W. Dooley, CO of the AF ROTC unit, is a frequent visitor. As a matter of fact, part of his office space serves as a store area for the models between flying sessions. Lt. David H. Brazelton is president of the Illini Liners. Dave is from Normal, Ill., and



★ ★ ★ ★ ★
Our 508th Advertisement!
REAL DIESEL ENGINE!
\$2.95
You can't beat this price!

- Ideal for planes, boats, midjet cars
- Actually runs at 7500 RPM, produces 1 7/8 HP
- Height a full 3 1/2 inches; weight 5 ounces
- Comes completely assembled, ready for operation

★ MAYBE WE'RE CRAZY, giving away a precision diesel engine, complete with cylinder and piston, carburetor, crankshaft, connecting rod, etc. for ONLY \$2.95. But we're selling thousands of DEEZILS all over the world, and that keeps our production costs down. DEEZIL is streamlined, compact, rugged. Starts quickly, easy to install; runs for years! Fast delivery if you ORDER DEEZIL today!

SEND \$2.95 plus 25¢ postage

★ **GOTHAM HOBBY CORP., Dept. A**
★ 107 E. 126th St., New York 35, N. Y. ★

WE PAY POSTAGE AND INSURANCE

You have tried the rest—Now try the best!

Write Dept. 50 **SMSAT E AND H** means "SUPER MAIL SERVICE" Write Dept. 50

Important Announcement

The leading Mail Order House in the Model Railroad Industry now invades the Model Airplane Field. Large and complete stock of kits, accessories and tools. We offer you the best and fastest "Super Mail Service"! Our complete catalog is 25c (no stamps), or use Air Trails as your catalog. Try us today! Minimum Order \$1.00. No C.O.D.'s! No Stamps! Send Check or Money Order to E and H STORES, Dept. 50, 130 W. Cheltenham Ave., Philadelphia 44, Penn

TERMS

THE E AND H STORES

130 W. CHELTEN AVE. PHILADELPHIA 44

"YOUR SUPPLIERS—NEVER YOUR COMPETITORS!"

100% WHOLESALE

SKY HOBBY, INC.

523 SOUTHWEST BLVD.

KANSAS CITY, MISSOURI

and

DEALERS HOBBY SUPPLY

POST OFFICE BOX 594-E

OTTUMWA, IOWA

FIRST CHOICE

of the 1951
NATIONALS

- Trophies especially designed for model aircraft meets . . .
- Beautiful Sun-Ray figures, rich gold color.
- Dozens of styles for different events. Low cost. Prompt shipment.

Write for free catalog.

RUSSELL BROS. PRODUCTS

312-314 K.P. Bldg.
Des Moines, Iowa



Berkeley

THE OUTSTANDING NAME IN- COMPLETELY PRE-FABRICATED SCALE CONTROLINERS!

Betty Skelton's "PITT'S SPECIAL"

.19 to .33 Engines — 25½" Span

The kit is produced with the permission of Miss Betty Skelton, National Aerobatic Champion, to use her personal insignia furnished in the kit on decals.

\$4.95



\$5.95

NORTH AMERICAN "T-28"

.19 to .36 Engines 30"

Completely Pre-fabricated, featuring the "Step-Keel" Fuselage construction.



\$5.95

This Deluxe kit incorporates a landing gear which may be retracted or extended at will, including the tail wheel. Automatic flaps, engine throttle control as well as elevator and "Autotrol" rudder operation make this laminar-flow airfoiled fighter an outstanding controliner. A specially machined four-notched aluminum spinner is included.

P-51 "MUSTANG"

37" SPAN - .19 TO .35 ENGINES



\$4.95

F-8-F "BEARCAT"

35½" SPAN - .29 TO .65 ENGINES

"Autotrol" automatic rudder control with ground-operated "U-Control" elevators, prevent slackening of lines in critical maneuvers.



P-47 "THUNDERBOLT"

40¾" SPAN - .29 TO .65 ENGINES

Engine Throttle control and fully automatic wing flaps make full scale-type flights possible with this famous battleship of the air. A special feature of this outstanding performer is the shear-pin motor mount.

\$4.95

"Manufactured under license, Jim Walker's "U-Control" Patent No. 2292416, and Bill Effinger's "Autotrol" Patent No. 2523902. "Controliner" is registered trade mark of Berkeley Models, Inc., West Hempstead, N. Y.

1951 CATALOG AVAILABLE

At Your Dealers,
or write direct.
25c

SOLD THRU
BERKELEY
DEALERS & DISTRIBUTORS

IF NO LOCAL DEALER IS CONVENIENT, MAIL ORDERS WILL BE FILLED BY BERKELEY MODEL SUPPLIES, DEPT. A.T., WEST HEMPSTEAD, N. Y. PLEASE INCLUDE 25c PACKING AND POST.

has long been considered a normal model builder. (Ouch!) He built his first model at 8, started to fly at 15, was a licensed pilot at 17, and while attending Illinois U. went through the Air Force ROTC to earn a commission.

Bison's 180 Lap Races. We've had some requests for data on how the Flying Bisons of Williamsville, N. Y., run off their 180 lap races which we've mentioned here from time to time. Here is the dope as provided by the club:

180 Lap Races—an open event for any and all modelers. You don't have to be a contest flyer to participate. The event is very simple; three flyers are given a signal to start, they must start their engines and proceed to fly for 180 laps or 15 miles when 70 foot lines are used. During these 180 laps they must land and restart their engines at least two times; the flyer to complete 180 laps first is the winner.

The model—any type is eligible, no restriction on design; model must have a workable landing gear.

The classes—Half-A, up to .09 cu. in. disp., 35-foot lines, .008 in. min. dia.; Class A, .09 to .19 cu. in. disp., 52½-foot lines, .010 min. dia.; Class B, .19 to .29 cu. in. disp., 60-foot lines, .012 min. dia.; Class C-D, .29 to .65 cu. in. disp., 70-foot lines, .016 min. dia.

The flying rules—contestants will be assigned to groups of three for their first heat flights in each class; the winners of each heat will then fly off in groups of three until a final winner in each class is determined; a take-off area will be set up, all refueling and restarting will be done in this area; flyer must leave the center of the circle while refueling and restarting, only one mechanic allowed for each flyer; man who is passing must pass high, others must give way to him; models must be kept below a 45 degree angle except in emergencies; this is a fun event and everything will be done to keep it as such, any deliberate fouling will be cause for disqualification.

People. Lt. Don Murray of Detroit who has been active in past Plymouth International contests is back in active service with a B-36 Recon outfit. John Young, one of the original members of the Jasco outfit, now in Hagerstown, Md., (he runs Deco) was married recently to Jane Sweigert. Edgar D. Hall, AN. FASRON 103, U. S. Naval Air Station, Patuxent River, Md., is most interested in getting plans for Bill Gibson's Arrow which appeared many years ago in "AT"—anyone got a set he can send Ed?

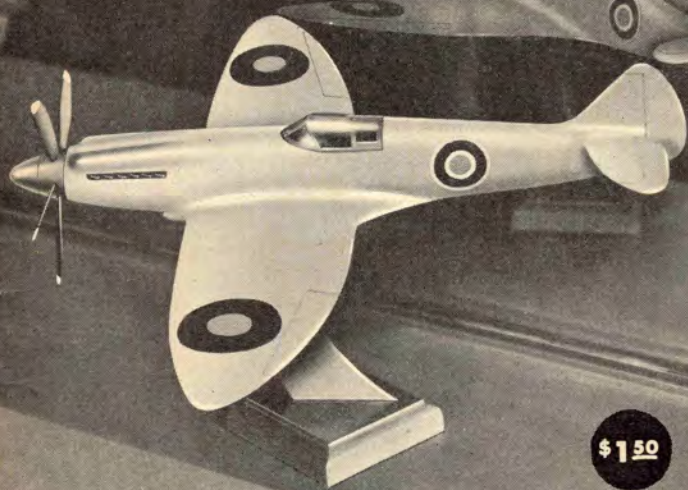
Nationals

(Continued from page 31)

Cargo event which did not count toward national championship points, 1st was taken by Randolph La Matt, Dallas, with a Wasp powered job that carried 14½ ounces! Daniel Simenson, Sheppard, Texas, was second with a Wasp .049 carrying 13 oz. Ted Grzeszczak, Jersey City, N.J., used a Wasp to carry 11 ounces for 3rd.

When all the shouting and computations were over Paul Simon 18, of Detroit was declared National Champion. Gene Jackman won the junior title and Bob Bienenstein, also of Detroit, took open class honors. Carl Goldberg was awarded the June Pierce Memorial Trophy for outstanding sportsmanship. The Detroit Balsa Bugs walked off with the best club award. Among the many dignitaries present at the award ceremonies were Navy air admirals and Cmdr. Arthur Godfrey—billed as the Navy's advertising manager! How true.

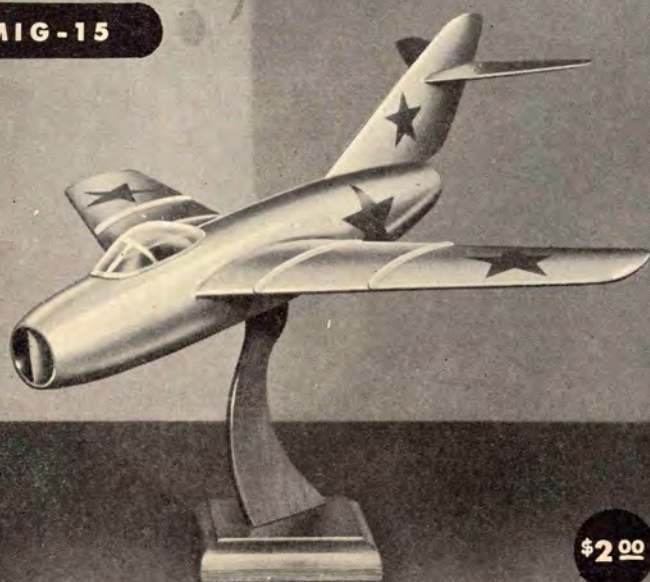
SPITFIRE MK-19



F-86 SABRE JET



MIG-15



FOR YOUR DISPLAY COLLECTION

You're gonna want all 3...

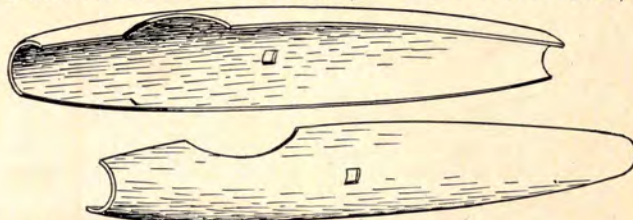
OF THESE OUTSTANDING NEW AUTHENTIC SCALE MODEL KITS



ALL PARTS SHAPED AND READY FOR ASSEMBLING

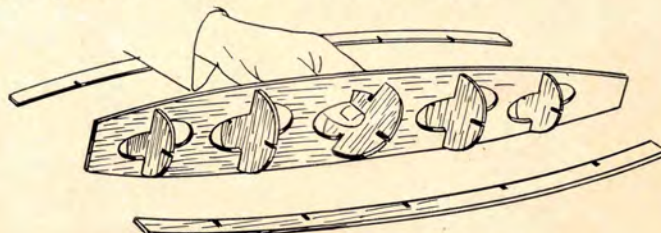
Testor certainly set a new high standard of quality with the development of this outstanding series of authentic scale model airplane kits! History-makers from the headlines of World War II and Korea, they are masterpieces of detail and design... impressively realistic in appearance... wonderfully easy to build because all parts are shaped and ready for assembling. You will want all three for your display collection, because they make an impressive grouping that will delight your friends and give you new pride of craftsmanship! See your dealer now...

Model	Wing Span	Overall Length
Spitfire.....	17-1/2"	16"
F-86 Sabre Jet.....	17"	19"
MIG-15.....	15-3/4"	16-1/4"



MOLDED BALSA PARTS

Fuselage half-sections and wing half-sections are actually molded into shape! This production process is an important new Testor development that simplifies and speeds construction... adds realism to appearance... makes possible a more perfect finish on your model.



KEY-LOK ASSEMBLY

Note how formers fit securely into place in the keel section with the simple slot-slide action of a key turning in a lock. This exclusive construction technique (patents pending) insures positive location and correct alignment of parts... gives your model greater strength... saves you building time and work.



**for power...price...performance
you can't beat "OK"!**

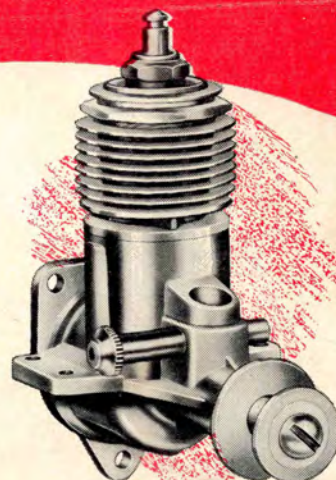
Meet "Herky," the "OK" Cub
... he's a BEAR for Power!

OK CUB .074

Packs a wallop! Most powerful engine in its class! Patented port design — an "OK" exclusive — provides greater turbulence, effective scavenging, higher power/weight ratio.

Displ. — .074
Bore — .479
Stroke — .415
RPM — 3,000 to 15,000
Weight — 1½ oz.

**Only
\$5.95**



OK

GLOW FUEL

Unlike some fuels, "OK" Glow Fuel operates over a wide range of climatic conditions.

85c



OK CUB .049

power kit

A \$6.15 value — assemble it yourself and save \$1.20! How's that for value!

ONLY \$4.95



**CUB .039
\$4.95**



**CUB .049
\$5.25**



**CUB .099
\$6.95**



COMBINATION PACKAGE

(Includes assembled engine, prop and tank.)

CUB .049 **\$5.75**
CUB .074 **\$6.75**
CUB .099 **\$7.75**



"HERKY" says ... "See Your Dealer—Say 'OK'."

Or write us direct:

HERKIMER TOOL & MODEL WORKS

110 Harter Street

Herkimer, N. Y.

Manufacturers of Famous "OK" CO₂ • "OK" Bantam • "OK" Hothead • "OK" Super 60 • "OK" Twin